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MARKET FORECAST AND ANALYSIS OF PROFESSIONAL SERVICES AND SYSTEMS OPERATIONS SECTORS

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Market Forecast and Analysis of Professional Services and Systems Operations Sectors

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Introduction

A
Objectives

IBM has been a long-time subscriber to INPUT's Market Analysis Program, which sizes, analyzes and forecasts the U.S. information services market. The Market Analysis Program analyzes the market in terms of delivery mode (e.g., professional services, software products, processing, etc.) as well as by market (e.g., insurance).

In addition to this type of information delivery, IBM needs to bring together in one place all INPUT's information related to the professional services, systems integration and systems operation market. For this purpose IBM has requested INPUT regroup and reanalyze previously-assembled data and analysis to focus specifically on these service markets. The reasons for doing so include:

- To produce a finer granularity in market sizing and forecasting, especially for professional service delivery submodes by vertical market and leading vendors and associated market share by vertical market.
- To identify issues that are driving specific segments of professional services (by submode and/or vertical industries).
- To apply IBM vertical industry segmentation/definitions, where they differ from INPUT's.
- To apply IBM's economic assumptions.
- To further define the Systems Operations markets into the component parts of hardware (new and previously purchased), software, maintenance, personnel and network costs.

The reanalysis of information contained in this report provides IBM a single-point information source that unites market sizing, forecasting, competitive analysis and sector trend analyses.

B
Scope

Professional services (including the professional services component of systems integration) and systems operations are segmented for the purposes of this report into 26 industry groups, as described in the IBM-supplied document *"Industry Classification Codes."*

Within each industry, the professional services data is allocated into professional services "submodes":

- Consulting
- Software Development
- Education and Training
- Systems Operations

Systems integration data is allocated into the "submodes":

- Software Development
- Design/Integration
- Project Mgmt/Consulting
- Education/Training
- Operations/Maintenance

INPUT's Systems Integration forecasts include the Information Technology portions of the Federal Government budgets for Defense and Civil agencies. The application of most "off-the-shelf" technology is included. Milspec Systems and commercial systems that are embedded in weapons platforms are not included in INPUT's market forecasts. In addition, INPUT does not attempt to acquire and forecast the information technology and services used in classified systems.

Systems operations data has been allocated into the "submodes":

- Platform operations
- Applications operations
- Network operations
- Desktop operations

Systems operations was redefined by INPUT in late 1992 into the sub-delivery modes of platform, applications, network, and desktop-based operations. These definitions better described the type of service that was being performed as opposed to the operations oriented services definition

that had been used in the past. Platform systems operations is defined as the day-to-day operation of pre-existing application software programs. Applications based systems operations includes the maintenance and updating of the applications being run by the vendor.

The following information is supplied for professional services, systems integration and systems operations by industry:

- Market size
- Vendors active in a market and their market share. Note: Generally, specific market share information is shown for five vendors or for at least half the applicable market (whichever is larger). INPUT has strived in the last two years to increase the market share report for IBM.

Summary form information is supplied by the sub-delivery modes of professional services/systems integration and systems operations by vendor.

A discussion of professional services-related issues in each industry analysis is included. These issues include:

- Trends, technology impacts, etc.
- Reasons for a vertical market being significantly above or below average.
- Reasons for vendor success, vendor strategies, etc.
- Generally, industry market trends are not discussed except for those that directly affect professional services or systems operations.

Where systems operations issues are different from professional services issues, these are distinguished and discussed.

In cases where there have been changes in market sizing/forecasts from prior years, this is noted and analyzed. (Generally, if the change is significant in terms of size or direction, this is discussed in the main text; small, technical changes will be explained in a "Reconciliation" section of the Executive Overview).

The basic source for information has been INPUT's 1991/1992 Market Analysis Program reports, data bases and underlying analyses. Analysis and secondary research has been performed as required (for example, to identify and spread professional services revenues of particular vendors).

Vendor data given is for 1992 and is calendarized as necessary. In some cases, vendor data, especially for industry allocations, is preliminary and/or estimated.

C
Methodology

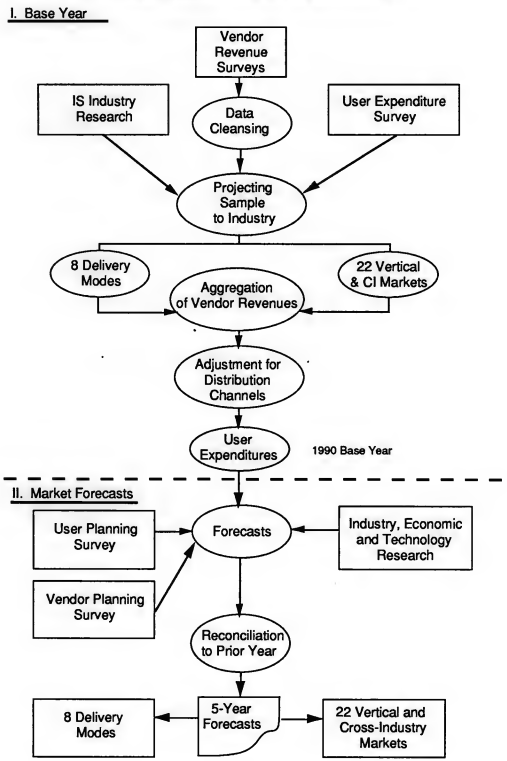
This report is a combination of INPUT's IS forecasts, quantitative analysis, factual information and industry knowledge.

1. Introduction

During 1991 and 1992 INPUT conducted in-depth interviews with 600 information services vendors, including nearly all of the largest 250 firms, with revenues of $20 million or more. These surveys and estimates provided the initial vendor revenue estimates for 1992. Total base year 1992 actual or forecast revenues are then summed into six delivery modes and 15 vertical and seven cross-industry segments for closer analysis and five-year projections. Only U.S revenues and professional services non-captive revenues were examined for this forecast. Conversion factors were applied to convert the vendor revenues to user expenditures. The conversion factors used for the information in this report can be found in the report *U.S. Professional Services Markets, 1992-1997*. Exhibit I-1 depicts the INPUT research methodology used in preparing the INPUT IS forecasts.

EXHIBIT I-1

INPUT Primary Market Research Methodology



2. Quantitative Analysis

a. INPUT created 15 worksheets, one for each major industry sector as defined by INPUT. Each worksheet contained the following information:

- A list of the two-digit Standard Industrial Classification(SIC) codes that comprise the industry sector.
- For each INPUT-defined sector, a crosswalk definition of the IBM-defined industry sector or sectors.
- An algorithm was developed for moving the INPUT-defined sector data to the appropriate IBM-defined sector or sectors.
- Where sectors do not match, an allocation factor was derived from SIC data from the U.S. Department of Commerce and INPUT's judgment of professional services market potential.

b. A computer program was applied to INPUT's data base to:

- Delete the INPUT inflation factors from the original INPUT professional services market forecast.
- Algorithms executed to segment the INPUT data and recast it in the IBM format.
- Apply the IBM-defined inflation factors.
- Create the new forecast data in the format defined by IBM for each of the 26 industry sectors.
- Create the new forecast data for each of the professional services, systems integration, and systems operations delivery modes.

c. All data was reviewed for reasonableness.

D
Factual Information

INPUT assembled the following from its data bases and vendor files:

- Vendors in a particular industry sector, with sizing as reported in INPUT's data bases.
- "Up and coming" vendors are included with industry leaders in report data.
- Contract information as identified in INPUT's "Corporate Project Data Base", and data collected from vendors for INPUT's Vendor Analysis Program and Systems Integration Program.

INPUT forecasts are presented in current dollars. In developing the five-year forecasts, INPUT has incorporated current economic assumptions regarding the U.S. economy as a whole. Exhibit I-2 presents the inflation assumptions from the 1992-1997 market forecast used in this report.

EXHIBIT I-2

Inflation Growth Rate Assumptions

	1992	1993	1994	1995	1996	1997	1998
INPUT	2.9%	3.2%	3.6%	3.7%	3.6%	3.6%	3.4%
IBM	2.6%	2.7%	2.9%	2.9%	2.8%	2.9%	2.9%

E

Industry Knowledge

Knowledge of the information services industry, professional services and individual industry sectors was added throughout the project. Tasks where this knowledge will be applied include:

- Allocation between INPUT-defined and IBM-defined industry sectors.
- Review of market size crosswalks.
- Allocation of particular vendor revenues across industries.
- Allocation of particular vendor revenues across submodes.
- Vendor strategies and positioning.
- Identification of applications by industry and submode.
- Identification of, and rationale for "up and coming" vendors.
- Classification of contracts between "professional services," "systems integration," and "systems operations."
- Issue and trend identification.

F

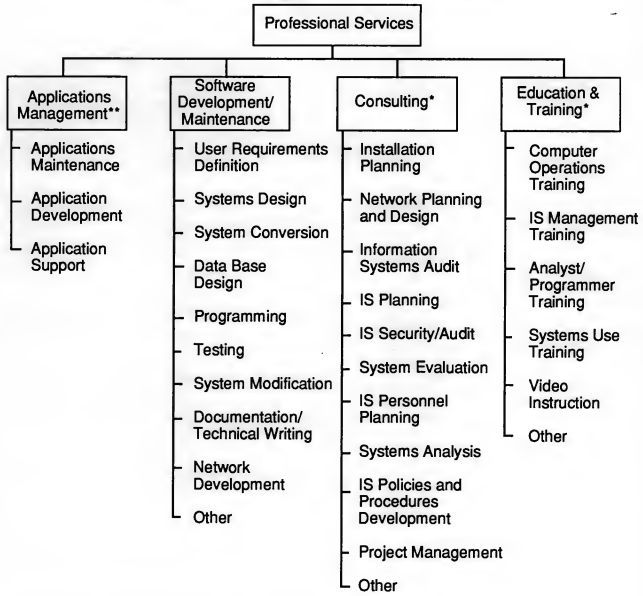
INPUT Definitions

1. Professional Services

This category includes four submodes: consulting, education and training, software development, and applications management. Exhibit I-3 provides additional detail.

EXHIBIT I-3

Professional Services Market Structure



*Related to computer systems, topics, or issues

**Vendor assumes full responsibility on contracted longer term basis

- *Consulting:* Services include management consulting (related to information systems), information systems re-engineering, information systems consulting, feasibility analysis and cost-effectiveness studies, and project management assistance. Services may be related to any aspect of the information system, including equipment, software, networks and systems operations.

- *Education and Training:* Services that provide training and education or the development of training materials related to information systems and services for the information systems professional and the user, including computer-aided instruction, computer-based education, and vendor instruction of user personnel in operations, design, programming and documentation. Education and training provided by school systems is not included. General education and training products are included as a cross-industry market sector.

- *Software Development:* Services include user requirements definition, systems design, contract programming, documentation, and implementation of software performed on a custom basis. Conversion and maintenance services are also included.

- *Applications Management*: The vendor has full responsibility for maintaining and upgrading some or all of the application systems that a client uses to support business operations and may develop and implement new application systems for the client.

  An applications management contract differs from traditional software development in the form of the client/vendor relationship. Under traditional software development services the relationship is project based. Under applications management it is time and function based.

  These services may be provided in combination or separately from platform systems operations.

2. Systems Integration (SI)

Systems integration is a vendor service that provides a complete solution to an information system, networking or automation development requirement through the custom selection and implementation of a variety of information system products and services. A systems integrator is responsible for the overall management of a systems integration contract and is the single point of contact and responsibility to the buyer for the delivery of the specified system function, on schedule and at the contracted price. (Refer to Exhibit I-4.)

EXHIBIT I-4

Products/Services in Systems Integration Projects

Equipment

- Information systems
- Communications

Software Products

- Systems software
- Applications software

Professional Services

- Consulting
  - Feasibility and trade-off studies
  - Selection of equipment, network and software
- Program/project management
- Design/integration
  - Systems design
  - Installation of equipment, network, and software
  - Demonstration and testing
- Software development
  - Modification of software packages
  - Modification of existing software
  - Custom development of software
- Education/training and documentation
- Systems operations/maintenance

Other Miscellaneous Products/Services

- Site preparation
- Data processing supplies
- Processing/network services
- Data/voice communication services

The components of a systems integration project are the following:

- *Equipment* - information processing and communications equipment required to build the systems solution. This component may include custom as well as off-the-shelf equipment to meet the unique needs of the project. The systems integration equipment category excludes turnkey systems by definition.

- *Software products* - prepackaged applications and systems software products.

- *Professional services* - the value-added component that adapts the equipment and develops, assembles, or modifies the software and hardware to meet the system's requirements. It includes all of the professional services activities required to develop, implement, and if included in the contract, operate an information system, including consulting, program/project management, design and integration, software development, education and training, documentation, and systems operations and maintenance.

- *Other services* - most systems integration contracts include other services and product expenditures that are not classified elsewhere. This category includes miscellaneous items such as engineering services, automation equipment, computer supplies, business support services and supplies, and other items required for a smooth development effort.

3. Systems Operations

Systems operations as a delivery mode was introduced in the 1990 Market Analysis and Systems Operations programs. Previously called Facilities Management, this delivery mode was created by taking the Systems Operations submode out of both Processing Services and Professional Services. For 1992 the submodes have been defined as follows.

Systems operations involves the operation and management of all or a significant part of the client's information systems functions under a long-term contract. These services can be provided in either of four distinct submodes where the difference is whether the support of applications, as well as data center operations, is included.

- *Platform systems operations* - The vendor manages and operates the computer systems, to perform the client's business functions, without taking responsibility for the client's application systems.

- *Applications systems operations* - The vendor manages and operates the computer systems to perform the client's business functions, and is also responsible for maintaining, or developing and maintaining, the client's application systems.

- *Network Management* - The vendor assumes responsibility for operating and managing the client's data communications systems. This may also include the voice communications of the client. A network management outsourcing contract may include only the management services or the full costs of the communications services and equipment plus the management services.

- *Desktop Services* - The vendor assumes responsibility for the deployment, maintenance, and connectivity among the personal computers and/or workstations in the client organization. The services may also include performing the help-desk function. Equipment as well as services can be part of a desktop services outsourcing contract.

  Note: This type of client service can also be provided through traditional professional services where the contractual criteria of outsourcing are not present.

Systems operations vendors now provide a wide variety of services in support of existing information systems. The vendor can plan, control, provide, operate, maintain and manage any or all components of the client's information systems environment (equipment, networks, applications systems), either at the client's site or the vendor's site.

Note: In the federal government market, systems operation services are also defined by equipment ownership with the terms "COCO" (Contractor-Owned, Contractor-Operated), and "GOCO" (Government-Owned, Contractor-Operated).

Blank

Professional Service Market Overview

A
Industry Forecast, 1993-1998

The INPUT forecast used as the basis of this report on the professional services, systems operations (processing), and systems integration markets are shown in Table 1 of the Appendix. Factors driving these forecasts are discussed below.

Professional Services
Continuing use of information services in business operations requires new and/or modified applications to meet changing business conditions and new technology. This demand cannot be met with current internal IS personnel in most firms since IS staffs have been cut back and there is more reliance on external suppliers on a temporary or continuing basis; the backlog of work, complexity of new or changing applications, and new technology requires education of and research by current IS and user personnel.

Mergers, acquisitions and reorganizations among organizations also leads to demand for use of service vendors. The need to link complex disparate mission-critical systems and applications is required to solve major problems. This further drives user interest in professional services capabilities.

A continuing lack of personnel with higher levels of IS skills at user sites creates a need for professional services vendors who have the resources to recruit, train, and personnel with specialized IS capabilities.

The increased demand for professional services continued although worsening economic conditions overtook sectors of business, particularly retail areas, in early 1990. Weakness spread to other business sectors including transportation and manufacturing. Despite improved conditions, the demand for professional services hasn't lessened since the need for increased productivity has resulted in pressure to keep IS staffs from growing.

Systems Operations
Major factors driving the SO market include the need to reduce and control corporate expenditures for information technology by letting a vendor with more experience in system planning who can afford to maintain personnel with specialized skills take responsibility for providing adequate resources and research in technology to accomplish required operational loads. This reduces the risks of utilizing information technology and frees internal resources and investment capital for strategic business activities.

Systems Integration
Reluctance to initiate long-term IS projects internally as well as competitive pressures and shortages of high level personnel are forcing organizations to seek the aid of vendors experienced in their industries and in needed applications to examine their core business and identify business solutions that can help to differentiate products and services in the market. In many cases, the application of technology can make the difference in offering services faster or reducing product development time and cost.

A very important factor driving the use of systems integration is that most IS expenditures are no longer being controlled exclusively by the IS organizations. Users are becoming the buyers of IS solutions and control the budgets for these projects. Systems Integrators with good track records provide an attractive alternative to internal IS organizations to adapt or develop systems that will meet user requirements.

B
Service Submode Forecast

Submode forecasts are presented as subsets of industry forecasts in Appendix A. Professional Services, by INPUT's traditional definition, includes software development, consulting, and education and training. Systems operations, traditionally referred to as facilities management and processing services, now referred to as platform or application processing, are also included.

Systems integration includes hardware, professional services, and other components. This analysis focuses on the professional services portion of SI, excluding the revenue from computer and communications hardware or other services. This professional services portion is presented as the components of software development, design/integration, project management/consulting, education & training, operations/maintenance, software products, and other services.

C
Competition

1. Major Vendors In Professional Services

Exhibit II-1 presents the major professional services vendors and their respective market share by submode of service. While literally thousands of professional firms exist, the market is dominated by about 35 vendors above $100 million in annual revenue.

2. Systems Operations Vendors

Exhibit II-1 presents the systems operations vendors and their respective market shares.

3. Major Vendors by Industry

An analysis of the major vendors in each vertical market is presented in Exhibit II-2. Approximately 120 vendors dominate the professional services/systems integration and systems operation marketplace, accounting for 50% or more of the market.

EXHIBIT II-1

VENDOR	SYSTEMS OPERATIONS	PROFESSIONAL SERVICES	SYSTEMS INTEGRATION	TOTAL
TOTAL MARKET ($M)	11671	19446	4428	35545
TOTAL ACCOUNTED (%)	57%	57%	91%	61%
International Business Machines	501	640	809	1950
Andersen Consulting	146	371	746	1263
Computer Sciences Corporation	570	626	330	1525.8
Electronic Data Systems	1600	560	439	2599
Unisys	53	218	186	457.4
Systems Applications Int'n'l Corp.	56	100	215	371
Digital Equipment	250	319	326	895.2
Martin Marietta Info. Systems	160	122	143	425
Boeing Computer Services	77	35	20	132
AGS Computers/NYNEX	4	180	35	219
BDM International	79	154	11	244
McDonnell Douglas Systems Integration	0	0	0	0
Arthur D. Little	0	173	0	173
Planning Research Corporation/ATI	65	242	114	421
CDC;Ceridian	17	82	44	143
Computer Task Group	9	211	18	237.7
Deloitte & Touche	7	129	21	157
SUN	5	45	0	50
KPMG (Peat Marwick)	19	125	27	171
Cap Gemini America	10	181	16	206.8
Price Waterhouse	6	78	12	96
National Education Corporation	2	129	2	133
Grumman Data Systems	28	125	69	222
American Management Systems	51	78	20	149.4
TRW, Inc.	51	122	1	174
Cincinnati Bell Information Services	21	100	2	123.3
Coopers & Lybrand	5	157	49	211.4
Ernst & Young	8	187	30	225
SHL Systemhouse	46	24	44	114
DMR	2	51	0	53
Analysts International	0	146	1	147
CACI, Inc.	2	86	0	88.2
Bechtel Information Technology	6	62	0	68
Analytical Sciences Corp. (The)	1	27	0	28
Computer Horizons	1	92	5	98
COMARCO	22	39	0	61
Comp. Data Sys (US West)	20	81	0	101
Telos Corp.	10	64	0	74
Moore DB Services	3	10	0	13
Keane, Inc.	4	100	5	109
Syscon Corporation	39	72	0	111
Fluor	3	24	0	27
Policy Management Systems	40	45	0	85
Lockheed	5	39	0	44
Bolt Beranek And Newman	2	99	1	102
Comshare	3	30	0	33
Computer Power Group Americas	0	63	2	65
Harris	0	74	1	75
Booz, Allen & Hamilton	0	111	2	113

EXHIBIT II-1 (CONT.)

VENDOR	SYSTEMS OPERATIONS	PROFESSIONAL SERVICES	SYSTEMS INTEGRATION	TOTAL
Continuum Company (The)	12	40	0	52
Oracle Complex Systems	0	74	1	75
Wang Laboratories	0	73	0	73
Dynamics Research	17	1	0	18
Litton Computer Services	41	25	0	66
SEI Corporation	110	31	0	141
Sterling Software	22	9	0	31
General Instruments	5	23	0	28
Systems & Computer Technology	62	41	4	107
Logica/Data Architects	0	39	1	39.6
Power Computing	45	0	0	45
HBO & Company	27	50	0	77
Computervision	0	96	1	97
Texas Instruments	4	49	3	56.4
Securities Industry Automation	138	33	0	171
AT&T/NCR	54	197	6	257
MARC, Inc.	0	24	0	24
Metier Management	0	33	0	33
Agway	30	7	0	37
SAS Institute	0	18	0	18
Deere Technical Services	0	11	0	11
Symantec	0	23	0	23
ASK Computer Systems	0	32	0	32
GTE	20	55	0	75
Disclosure, Inc.	21	19	0	40
Genix	64	11	0	75
Softech, Inc.	1	46	0	47
Shared Medical Systems	201	25	0	226
Combustion Engineering	0	15	0	15
Citicorp Information Resources	11	0	0	11
Hewlett-Packard	14	207	7	228
Allen-Bradley	2	62	0	64
CAPSO PALLM Systems	0	16	0	16
First Data Resources	96	38	0	134
Baxter-Travenol Laboratories	0	18	0	18
VISA USA	5	2	0	7
American Software	0	44	0	44
Ameritech	0	21	0	21
Compucare	10	19	0	29
John Hancock Health Plans	14	14	0	28
Meditech	0	21	0	21
Triad	0	9	0	9
Pentamation	4	9	0	13
Cycare Systems	26	7	0	33
Automated Data Processing	9	3	0	12
Intermetrics	0	24	0	24
Tandem Computers	0	55	2	57
Perot Systems	96	109	3	208
Babcock & Wilcox	4	15	0	19
Compugraphic	1	7	0	8
EI International	0	4	0	4
DST Systems	65	10	0	75

EXHIBIT II-1 (CONT.)

VENDOR	SYSTEMS OPERATIONS	PROFESSIONAL SERVICES	SYSTEMS INTEGRATION	TOTAL
XEROX Computer Services	2	20	0	22
GEIS Co	39	50	0	89
Teknekron	0	13	0	13
May & Speh	15	0	0	14.5
Effective Management	0	7	0	7
XL/Systems	0	39	0	39
Logicon	1	272	0	273
Comtex	1	28	0	29
Computer Curriculum Corporation	1	4	0	5
Compuware	0	31	0	31
Fiserv	139	12	0	151
Groupe Bull	16	114	10	140
Apple Computer	3	20	0	23
Adia	0	33	0	33
Automated Business Systems	0	8	0	8
Brandon Systems	0	40	0	40
Centel	33	45	0	78
Computer Associates Inc.	0	83	0	83
Covia	79	4	0	83
Technicon	32	2	0	34
Data General	4	42	0	46
Technalysis	0	26	0	26
Dun & Bradstreet	0	40	0	40
McKinsey	0	126	0	126
Affiliated	215	3	0	218
Shared Financial	0	29	0	29
Global Info. Systems Technology	2	11	0	13
ISI	26	4	0	30
McGraw-Hill, Inc.	0	7	0	7
Mellon Bank	46	11	0	57
Merrill Corporation	1	2	0	3
First Financial Mgmt.	195	42	0	237
Cadence	0	28	0	28
National Computer Systems	0	28	0	28
TSC	0	101	2	103
Newtrend Group	5	6	0	11
On-Line Computer Library Center	45	3	0	48
Wicat	6	21	2	29
Ross	0	22	0	22
Security Pacific Corporation	9	20	0	29
Systematics	175	15	0	190
Total Systems Services	7	0	0	7
Fujitsu	2	51	0	53
Network Systems	4	23	2	29
IMI	0	34	0	34
RCG	0	102	0	102
SAP America	0	16	0	16
Warner	26	8	0	34
MCI	6	17	0	23
Computerland	1	38	0	39
ERI	11	10	0	21

EXHIBIT II-2

VENDOR	MANUFACTURING TOTAL	AUTOMOTIVE TOTAL	AEROSPACE TOTAL	ELECTRICAL MACHINERY TOTAL	CONSTRUCTION TOTAL
TOTAL MARKET ($M)	2693	460	638	1245	148
TOTAL ACCOUNTED (%)	55%	59%	58%	55%	60%
International Business Machines	152	31	48	60	12
Andersen Consulting	142	23	32	52	4
Computer Sciences Corporation	90	14	41	41	6
Electronic Data Systems	125	30	47	88	11
Unisys	14	10	3	3	0
Systems Applications Int'n'l Corp.	19	1	7	0	2
Digital Equipment	125	25	11	36	3
Martin Marietta Info. Systems	6	0	8	0	0
Boeing Computer Services	2	0	0	0	0
AGS Computers/NYNEX	21	4	7	15	1
BDM International	16	12	14	1	0
McDonnell Douglas Systems Integration	0	0	0	0	0
Arthur D. Little	20	6	10	12	0
Planning Research Corporation/ATI	23	1	5	15	3
CDC;Ceridian	0	0	0	3	2
Computer Task Group	45	15	10	24	1
Deloitte & Touche	19	4	2	11	1
SUN	5	2	3	0	0
KPMG (Peat Marwick)	9	1	2	7	0
Cap Gemini America	19	0	0	0	0
Price Waterhouse	7	2	0	8	0
National Education Corporation	7	0	0	3	0
Grumman Data Systems	23	2	5	15	3
American Management Systems	0	0	2	0	0
TRW, Inc.	6	0	0	3	0
Cincinnati Bell Information Services	5	0	0	2	0
Coopers & Lybrand	19	8	4	19	0
Ernst & Young	10	2	4	13	0
SHL Systemhouse	4	0	0	0	0
DMR	0	0	0	0	0
Analysts International	11	11	0	29	0
CACI, Inc.	6	0	3	0	0
Bechtel Information Technology	20	0	0	3	25
Analytical Sciences Corp. (The)	5	0	0	1	0
Computer Horizons	3	0	4	16	0
COMARCO	6	0	5	2	0
Comp. Data Sys (US West)	3	0	2	2	0
Telos Corp.	3	0	10	0	0
Moore DB Services	1	0	0	1	0
Keane, Inc.	9	11	0	7	0
Syscon Corporation	15	0	0	3	0
Fluor	21	0	0	2	0
Policy Management Systems	0	0	0	0	0
Lockheed	10	0	3	3	0
Bolt Beranek And Newman	13	0	0	0	1
Comshare	10	0	0	1	0
Computer Power Group Americas	9	0	0	1	1
Harris	20	0	0	6	0
Booz, Allen & Hamilton	8	5	7	4	0

EXHIBIT II-2 (CONT.)

VENDOR	MANUFACTURING TOTAL	AUTOMOTIVE TOTAL	AEROSPACE TOTAL	ELECTRICAL MACHINERY TOTAL	CONSTRUCTION TOTAL
Continuum Company (The)	0	0	0	0	0
Oracle Complex Systems	8	0	0	9	0
Wang Laboratories	11	0	0	1	0
Dynamics Research	0	0	0	1	0
Litton Computer Services	9	0	9	1	0
SEI Corporation	0	0	0	0	0
Sterling Software	4	0	0	1	0
General Instruments	20	0	0	0	0
Systems & Computer Technology	0	0	0	0	0
Logica/Data Architects	5	0	0	0	2
Power Computing	10	0	0	1	1
HBO & Company	0	0	0	0	0
Computervision	19	12	9	20	2
Texas Instruments	9	0	0	2	1
Securities Industry Automation	0	0	0	0	0
AT&T/NCR	10	0	0	9	2
MARC, Inc.	0	0	0	0	0
Metier Management	15	5	6	7	0
Agway	0	0	0	0	0
SAS Institute	5	0	0	1	0
Deere Technical Services	6	4	0	1	0
Symantec	4	0	0	0	0
ASK Computer Systems	6	0	0	4	0
GTE	2	0	0	0	0
Disclosure, Inc.	0	0	0	0	0
Genix	17	1	0	3	0
Softech, Inc.	1	0	0	1	0
Shared Medical Systems	0	0	0	0	0
Combustion Engineering	0	0	0	1	0
Citicorp Information Resources	0	0	0	0	0
Hewlett-Packard	24	0	0	16	2
Allen-Bradley	16	4	5	8	1
CAPSO PALLM Systems	0	0	0	0	0
First Data Resources	0	0	0	0	0
Baxter-Travenol Laboratories	0	0	0	0	0
VISA USA	0	0	0	0	0
American Software	9	0	0	2	0
Ameritech	0	0	0	3	0
Compucare	0	0	0	0	0
John Hancock Health Plans	0	0	0	0	0
Meditech	0	0	0	0	0
Triad	0	2	0	0	0
Pentamation	0	0	0	0	0
Cycare Systems	0	0	0	0	0
Automated Data Processing	0	0	0	0	0
Intermetrics	5	4	7	2	0
Tandem Computers	9	0	2	2	0
Perot Systems	18	0	0	0	0
Babcock & Wilcox	4	0	0	1	0
Compugraphic	0	0	0	0	0
EI International	0	0	0	0	0
DST Systems	0	0	0	0	0

EXHIBIT II-2 (CONT.)

VENDOR	MANUFACTURING TOTAL	AUTOMOTIVE TOTAL	AEROSPACE TOTAL	ELECTRICAL MACHINERY TOTAL	CONSTRUCTION TOTAL
XEROX Computer Services	6	0	2	1	0
GEIS Co	10	0	4	2	0
Teknekron	0	0	0	0	0
May & Speh	1	2	0	1	0
Effective Management	2	0	0	0	1
XL/Systems	6	5	0	0	0
Logicon	4	0	0	4	0
Comtex	0	0	0	0	0
Computer Curriculum Corporation	0	0	0	0	0
Compuware	1	1	1	1	0
Fiserv	0	0	0	0	0
Groupe Bull	6	0	0	2	0
Apple Computer	0	0	0	0	1
Adia	11	0	0	0	0
Automated Business Systems	1	0	0	0	0
Brandon Systems	2	0	0	0	0
Centel	3	0	0	0	0
Computer Associates Inc.	14	1	4	4	0
Covia	0	0	0	0	0
Technicon	0	0	0	0	0
Data General	4	0	0	2	0
Technalysis	3	0	0	0	0
Dun & Bradstreet	2	0	0	3	0
McKinsey	17	0	3	4	0
Affiliated	0	0	0	0	0
Shared Financial	0	0	0	0	0
Global Info. Systems Technology	0	0	0	0	0
ISI	2	2	2	0	0
McGraw-Hill, Inc.	0	0	0	0	0
Mellon Bank	0	0	0	0	0
Merrill Corporation	0	0	0	0	0
First Financial Mgmt.	0	0	0	0	0
Cadence	1	0	0	27	0
National Computer Systems	0	0	0	0	0
TSC	8	2	4	18	0
Newtrend Group	0	0	0	0	0
On-Line Computer Library Center	0	0	0	0	0
Wicat	0	0	0	0	0
Ross	5	0	0	2	0
Security Pacific Corporation	0	3	0	0	0
Systematics	0	0	0	0	0
Total Systems Services	0	0	0	0	0
Fujitsu	10	0	4	0	0
Network Systems	5	1	2	0	0
IMI	0	0	0	0	0
RCG	7	0	5	1	0
SAP America	5	0	2	0	0
Warner	0	0	0	0	0
MCI	1	1	0	0	0
Computerland	1	1	0	1	0
ERI	0	0	0	0	0

EXHIBIT II-2 (CONT.)

VENDOR	PROCESS TOTAL	CONSUMER TOTAL	CHEMICAL/ PHARMACEUTICAL TOTAL	PETROLEUM TOTAL	RUBBER/GLASS/ MINERALS TOTAL
TOTAL MARKET ($M)	1376	402	381	743	658
TOTAL ACCOUNTED (%)	55%	59%	57%	57%	55%
International Business Machines	102	21	33	58	39
Andersen Consulting	96	21	18	50	23
Computer Sciences Corporation	61	13	9	25	17
Electronic Data Systems	97	22	33	76	45
Unisys	2	1	0	7	5
Systems Applications Int'n'l Corp.	0	0	0	0	0
Digital Equipment	39	9	18	31	24
Martin Marietta Info. Systems	2	2	0	3	3
Boeing Computer Services	0	0	0	0	1
AGS Computers/NYNEX	9	5	2	6	5
BDM International	0	1	1	5	5
McDonnell Douglas Systems Integration	0	0	0	0	0
Arthur D. Little	7	3	4	6	4
Planning Research Corporation/ATI	12	0	0	0	1
CDC;Ceridian	0	2	2	2	3
Computer Task Group	12	8	7	12	5
Deloitte & Touche	20	5	5	9	4
SUN	2	0	0	0	0
KPMG (Peat Marwick)	31	4	2	5	1
Cap Gemini America	0	2	0	0	3
Price Waterhouse	0	2	3	5	3
National Education Corporation	12	2	2	6	3
Grumman Data Systems	2	0	0	0	2
American Management Systems	3	0	0	0	0
TRW, Inc.	0	0	0	0	0
Cincinnati Bell Information Services	0	0	0	0	0
Coopers & Lybrand	21	7	4	13	7
Ernst & Young	5	3	4	6	6
SHL Systemhouse	12	0	0	0	0
DMR	0	0	0	0	0
Analysts International	16	2	4	5	2
CACI, Inc.	6	0	0	4	2
Bechtel Information Technology	11	0	0	0	6
Analytical Sciences Corp. (The)	0	0	0	0	2
Computer Horizons	7	4	3	3	3
COMARCO	0	0	0	0	0
Comp. Data Sys (US West)	0	0	0	0	0
Telos Corp.	0	0	0	0	0
Moore DB Services	0	0	0	0	1
Keane, Inc.	7	2	3	0	2
Syscon Corporation	0	0	0	0	0
Fluor	0	0	0	0	4
Policy Management Systems	0	0	0	0	0
Lockheed	2	0	0	0	0
Bolt Beranek And Newman	0	0	1	4	1
Comshare	6	4	0	0	0
Computer Power Group Americas	5	0	0	2	3
Harris	25	4	5	4	3
Booz, Allen & Hamilton	5	3	8	3	6

EXHIBIT II-2 (CONT.)

VENDOR	PROCESS TOTAL	CONSUMER TOTAL	CHEMICAL/ PHARMACEUTICAL TOTAL	PETROLEUM TOTAL	RUBBER/GLASS/ MINERALS TOTAL
Continuum Company (The)	0	0	0	0	0
Oracle Complex Systems	4	0	4	4	0
Wang Laboratories	0	0	0	0	3
Dynamics Research	0	0	0	0	0
Litton Computer Services	0	0	2	0	2
SEI Corporation	0	0	0	0	0
Sterling Software	0	0	0	0	2
General Instruments	2	0	0	0	6
Systems & Computer Technology	0	0	0	0	0
Logica/Data Architects	0	0	0	0	0
Power Computing	3	2	0	4	2
HBO & Company	0	0	0	0	0
Computervision	11	0	3	0	5
Texas Instruments	3	0	0	0	2
Securities Industry Automation	0	0	0	0	0
AT&T/NCR	5	0	4	6	20
MARC, Inc.	0	0	0	0	0
Metier Management	0	0	0	0	0
Agway	1	27	0	0	0
SAS Institute	0	0	0	0	1
Deere Technical Services	0	0	0	0	0
Symantec	0	0	0	0	0
ASK Computer Systems	7	2	3	7	3
GTE	0	0	0	2	0
Disclosure, Inc.	0	0	0	0	0
Genix	4	2	3	2	4
Softech, Inc.	0	1	0	0	0
Shared Medical Systems	0	0	0	0	0
Combustion Engineering	0	0	0	0	0
Citicorp Information Resources	0	0	0	0	0
Hewlett-Packard	14	4	3	4	7
Allen-Bradley	4	0	0	4	3
CAPSO PALLM Systems	0	0	0	0	0
First Data Resources	0	0	0	0	0
Baxter-Travenol Laboratories	0	0	0	0	0
VISA USA	0	0	0	0	0
American Software	6	2	0	2	3
Ameritech	0	0	0	0	3
Compucare	0	0	0	0	0
John Hancock Health Plans	0	0	0	0	0
Meditech	0	0	0	0	0
Triad	0	0	0	0	0
Pentamation	0	0	0	0	0
Cycare Systems	0	0	0	0	0
Automated Data Processing	0	0	0	0	0
Intermetrics	0	0	0	0	0
Tandem Computers	0	2	0	0	2
Perot Systems	18	0	0	0	5
Babcock & Wilcox	4	0	0	1	3
Compugraphic	0	0	0	0	0
EI International	0	0	0	1	0
DST Systems	0	0	0	0	0

EXHIBIT II-2 (CONT.)

VENDOR	PROCESS TOTAL	CONSUMER TOTAL	CHEMICAL/ PHARMACEUTICAL TOTAL	PETROLEUM TOTAL	RUBBER/GLASS/ MINERALS TOTAL
XEROX Computer Services	3	3	0	0	0
GEIS Co	2	0	0	4	4
Teknekron	0	0	0	0	0
May & Speh	0	0	0	0	0
Effective Management	0	0	0	0	0
XL/Systems	0	0	0	0	2
Logicon	1	0	0	0	0
Comtex	0	0	0	0	0
Computer Curriculum Corporation	0	0	0	0	0
Compuware	1	1	1	1	0
Fiserv	0	0	0	0	0
Groupe Bull	2	2	3	6	4
Apple Computer	0	0	0	0	0
Adia	2	0	1	0	2
Automated Business Systems	0	0	0	0	1
Brandon Systems	0	1	0	0	1
Centel	0	0	0	0	2
Computer Associates Inc.	6	2	1	2	4
Covia	0	0	0	0	0
Technicon	0	0	3	0	0
Data General	0	0	0	0	0
Technalysis	0	0	0	0	2
Dun & Bradstreet	0	2	0	0	2
McKinsey	6	6	2	9	6
Affiliated	0	0	0	0	0
Shared Financial	0	0	0	0	0
Global Info. Systems Technology	0	0	0	0	0
ISI	0	0	0	0	0
McGraw-Hill, Inc.	0	0	0	0	0
Mellon Bank	0	0	0	0	0
Merrill Corporation	0	0	0	0	0
First Financial Mgmt.	0	0	0	0	0
Cadence	0	0	0	0	0
National Computer Systems	0	0	0	0	0
TSC	6	27	4	8	4
Newtrend Group	0	0	0	0	0
On-Line Computer Library Center	0	0	0	0	0
Wicat	0	0	0	0	0
Ross	0	0	0	0	0
Security Pacific Corporation	0	0	0	0	0
Systematics	0	0	0	0	0
Total Systems Services	0	0	0	0	0
Fujitsu	0	0	2	0	5
Network Systems	0	0	0	0	1
IMI	0	0	0	0	0
RCG	0	0	0	5	0
SAP America	0	0	8	0	0
Warner	0	0	0	0	0
MCI	0	0	0	0	0
Computerland	0	0	0	0	0
ERI	0	0	0	0	0

EXHIBIT II-2 (CONT.)

VENDOR	COMMUNICATIONS TOTAL	COMPUTER SERVICES TOTAL	CONSULTANTS TOTAL	HEALTH TOTAL	HIGHER EDUCAT TOTAL
TOTAL MARKET ($M)	1226	95	59	2340	1034
TOTAL ACCOUNTED (%)	58%	60%	63%	56%	55%
International Business Machines	57	4	4	77	42
Andersen Consulting	49	4	2	71	16
Computer Sciences Corporation	55	5	2.8	84	27
Electronic Data Systems	57	4	2	114	37
Unisys	31	3	1.4	25	18
Systems Applications Int'n'l Corp.	0	0	0	0	4
Digital Equipment	55	5	2.2	56	36
Martin Marietta Info. Systems	2	0	0	2	1
Boeing Computer Services	3	1	0	0	2
AGS Computers/NYNEX	23	0	2	14	8
BDM International	0	0	0	0	5
McDonnell Douglas Systems Integration	0	0	0	0	0
Arthur D. Little	7	0	0	12	3
Planning Research Corporation/ATI	0	0	1	21	9
CDC;Ceridian	0	1	0	5	3
Computer Task Group	23	3	1.7	4	4
Deloitte & Touche	0	0	0	16	5
SUN	0	0	1	0	9
KPMG (Peat Marwick)	0	0	0	10	11
Cap Gemini America	37	2.5	1.3	14	6
Price Waterhouse	1	0	0	5	6
National Education Corporation	8	0	0	10	7
Grumman Data Systems	0	1	0	0	5
American Management Systems	22	0	0.4	0	18
TRW, Inc.	9	1	0	0	0
Cincinnati Bell Information Services	45	1	1.3	0	8
Coopers & Lybrand	4	0	1.4	9	9
Ernst & Young	12	0	0	7	8
SHL Systemhouse	16	0	0	0	5
DMR	7	0	0	0	3
Analysts International	13	1	1	0	1
CACI, Inc.	0	2.2	0	0	0
Bechtel Information Technology	0	0	0	0	0
Analytical Sciences Corp. (The)	0	0	0	0	0
Computer Horizons	18	0	0	1	1
COMARCO	0	0	0	0	0
Comp. Data Sys (US West)	7	0	0	0	7
Telos Corp.	2	0	0	0	1
Moore DB Services	0	1	0	0	0
Keane, Inc.	9	0	1	26	2
Syscon Corporation	0	0	0	0	0
Fluor	0	0	0	0	0
Policy Management Systems	0	0	0	0	0
Lockheed	0	0	0	0	0
Bolt Beranek And Newman	6	0	0	1	1
Comshare	0	1	1	2	0
Computer Power Group Americas	12	0	0	0	0
Harris	0	0	0	0	0
Booz, Allen & Hamilton	5	0	0	6	3

EXHIBIT II-2 (CONT.)

VENDOR	COMMUNICATIONS TOTAL	COMPUTER SERVICES CONSULTANTS TOTAL	HEALTH TOTAL	HIGHER EDUCAT TOTAL
Continuum Company (The)	0	0	0	0	0
Oracle Complex Systems	0	0	0	0	3
Wang Laboratories	0	0	1	10	0
Dynamics Research	0	0	0	0	0
Litton Computer Services	0	0	1	2	2
SEI Corporation	0	0	0	0	0
Sterling Software	0	0	0	0	0
General Instruments	0	0	0	0	0
Systems & Computer Technology	0	0	0	0	38
Logica/Data Architects	2	2.6	0	0	0
Power Computing	3	0	1	5	0
HBO & Company	0	0	0	77	0
Computervision	0	0	1	0	9
Texas Instruments	0	0	0.4	0	13
Securities Industry Automation	0	0	0	0	0
AT&T/NCR	11	0	1	16	18
MARC, Inc.	0	0	0	0	0
Metier Management	0	0	0	0	0
Agway	0	0	0	0	0
SAS Institute	0	0	0	0	3
Deere Technical Services	0	0	0	0	0
Symantec	0	0	0	0	0
ASK Computer Systems	0	0	0	0	0
GTE	2	1	0	13	9
Disclosure, Inc.	0	0	0	0	0
Genix	0	1	0	0	2
Softech, Inc.	0	0	0	0	0
Shared Medical Systems	0	0	0	226	0
Combustion Engineering	0	0	0	0	0
Citicorp Information Resources	0	0	0	0	0
Hewlett-Packard	11	1	0	11	15
Allen-Bradley	0	0	0	2	6
CAPSO PALLM Systems	0	0	0	0	0
First Data Resources	0	0	0	80	0
Baxter-Travenol Laboratories	0	0	0	18	0
VISA USA	0	0	0	0	0
American Software	0	0	0	4	0
Ameritech	0	0	0	0	0
Compucare	0	0	0	29	0
John Hancock Health Plans	0	0	0	24	0
Meditech	0	0	0	21	0
Triad	0	0	0	0	0
Pentamation	0	0	0	5	0
Cycare Systems	0	0	0	33	0
Automated Data Processing	0	0	0	0	0
Intermetrics	0	1	0	1	0
Tandem Computers	0	1	0	2	0
Perot Systems	0	0	0	48	3
Babcock & Wilcox	0	0	0	0	0
Compugraphic	0	0	0	0	0
EI International	0	0	0	0	0
DST Systems	0	0	0	0	0

EXHIBIT II-2 (CONT.)

VENDOR	COMMUNICATIONS TOTAL	COMPUTER SERVICES TOTAL	CONSULTANTS TOTAL	HEALTH TOTAL	HIGHER EDUCAT TOTAL
XEROX Computer Services	0	0	0	0	0
GEIS Co	0	0	0	2	0
Teknekron	0	0	0	0	0
May & Speh	0	0	0.5	0	0
Effective Management	0	0	0	0	0
XL/Systems	0	1	0	10	0
Logicon	0	0	0	0	2
Comtex	0	1	0	0	0
Computer Curriculum Corporation	0	0	0	0	1
Compuware	2	0	2	2	1
Fiserv	0	0	0	0	0
Groupe Bull	12	0	0	3	12
Apple Computer	0	0	0	0	10
Adia	0	1	1	0	0
Automated Business Systems	0	0	0	0	1
Brandon Systems	4	1	0	0	0
Centel	0	0	0	0	0
Computer Associates Inc.	0	0	0	2	2
Covia	0	1	0	0	4
Technicon	0	0	0	31	0
Data General	3	1	0	6	1
Technalysis	0	0	0	1	0
Dun & Bradstreet	1	0	0	1	2
McKinsey	4	0	0	3	1
Affiliated	10	0	0	5	2
Shared Financial	0	0	0	0	0
Global Info. Systems Technology	0	0	0	0	2
ISI	0	0	0	0	0
McGraw-Hill, Inc.	0	0	0	0	2
Mellon Bank	0	0	0	0	0
Merrill Corporation	0	0	0	0	0
First Financial Mgmt.	0	0	0	25	0
Cadence	0	0	0	0	0
National Computer Systems	0	0	0	0	9
TSC	1	0	0	2	0
Newtrend Group	0	0	0	0	0
On-Line Computer Library Center	0	0	0	0	48
Wicat	0	0	0	0	9
Ross	0	0	0	0	0
Security Pacific Corporation	0	0	0	0	0
Systematics	0	0	0	0	0
Total Systems Services	0	0	0	0	0
Fujitsu	10	2	0	0	6
Network Systems	9	0	0	2	0
IMI	10	0	0	0	0
RCG	7	1	0	0	0
SAP America	0	0	0	0	0
Warner	1	0	0	0	2
MCI	6	0	0	0	1
Computerland	3	0	1	3	1
ERI	0	0	0	2	0

EXHIBIT II-2 (CONT.)

VENDOR	MEDIA TOTAL	SCHOOLS TOTAL	STATE & LOCAL GOVERNMENT TOTAL	TRANSPORTATION TOTAL	UTILITIES TOTAL
TOTAL MARKET ($M)	1129	607	3149	458	513
TOTAL ACCOUNTED (%)	55%	57%	55%	59%	69%
International Business Machines	57	22	125	24	38
Andersen Consulting	60	6	93	18	54
Computer Sciences Corporation	26	22	143	15	19
Electronic Data Systems	29	27	273	28	34
Unisys	9	18	67	19	0
Systems Applications Int'n'l Corp.	0	0	29	0	0
Digital Equipment	22	27	59	12	33
Martin Marietta Info. Systems	0	0	31	0	0
Boeing Computer Services	2	7	32	0	0
AGS Computers/NYNEX	7	7	17	0	6
BDM International	0	0	21	0	0
McDonnell Douglas Systems Integration	0	0	0	0	0
Arthur D. Little	3	0	30	8	7
Planning Research Corporation/ATI	11	5	54	0	18
CDC;Ceridian	18	4	18	8	17
Computer Task Group	14	5	10	0	2
Deloitte & Touche	9	3	12	1	0
SUN	2	3	6	0	0
KPMG (Peat Marwick)	5	2	21	3	5
Cap Gemini America	13	8	19	0	2
Price Waterhouse	2	2	13	0	3
National Education Corporation	12	3	7	3	4
Grumman Data Systems	4	2	46	0	0
American Management Systems	0	12	32	0	0
TRW, Inc.	5	0	16	0	0
Cincinnati Bell Information Services	21	6	19	0	0
Coopers & Lybrand	11	1	18	0	11
Ernst & Young	19	3	33	3	5
SHL Systemhouse	14	4	34	0	0
DMR	6	0	0	2	0
Analysts International	9	1	6	0	5
CACI, Inc.	6	1	3	0	0
Bechtel Information Technology	0	0	0	0	0
Analytical Sciences Corp. (The)	0	2	0	9	0
Computer Horizons	5	5	4	4	0
COMARCO	0	0	0	0	0
Comp. Data Sys (US West)	3	2	23	0	0
Telos Corp.	3	0	5	0	0
Moore DB Services	0	1	5	0	0
Keane, Inc.	0	1	4	0	2
Syscon Corporation	0	0	0	0	0
Fluor	0	0	0	0	0
Policy Management Systems	0	0	0	0	0
Lockheed	0	0	16	7	0
Bolt Beranek And Newman	5	0	4	0	0
Comshare	3	2	1	0	0
Computer Power Group Americas	5	2	6	6	5
Harris	2	0	4	2	0
Booz, Allen & Hamilton	4	2	11	5	2

EXHIBIT II-2 (CONT.)

VENDOR	MEDIA TOTAL	SCHOOLS TOTAL	STATE & LOCAL GOVERNMENT TOTAL	TRANSPORTATION TOTAL	UTILITIES TOTAL
Continuum Company (The)	0	0	0	0	0
Oracle Complex Systems	3	5	8	0	5
Wang Laboratories	9	0	17	0	0
Dynamics Research	0	0	0	0	0
Litton Computer Services	2	0	0	2	0
SEI Corporation	0	0	0	0	0
Sterling Software	0	0	0	0	0
General Instruments	0	0	0	0	0
Systems & Computer Technology	0	24	41	0	0
Logica/Data Architects	0	0	0	3	0
Power Computing	1	2	0	0	2
HBO & Company	0	0	0	0	0
Computervision	0	1	3	0	2
Texas Instruments	1	8	6	4	0
Securities Industry Automation	0	0	0	0	0
AT&T/NCR	13	8	42	0	4
MARC, Inc.	19	0	0	0	0
Metier Management	0	0	0	0	0
Agway	0	0	0	0	0
SAS Institute	0	2	3	1	0
Deere Technical Services	0	0	0	0	0
Symantec	0	1	0	0	0
ASK Computer Systems	0	0	0	0	0
GTE	9	4	8	0	0
Disclosure, Inc.	0	0	1	0	0
Genix	5	2	4	0	4
Softech, Inc.	0	0	4	0	0
Shared Medical Systems	0	0	0	0	0
Combustion Engineering	0	0	0	0	14
Citicorp Information Resources	0	0	1	0	0
Hewlett-Packard	12	8	25	0	4
Allen-Bradley	6	1	0	0	0
CAPSO PALLM Systems	0	0	0	0	0
First Data Resources	0	0	26	0	0
Baxter-Travenol Laboratories	0	0	0	0	0
VISA USA	0	0	0	0	0
American Software	0	0	0	2	3
Ameritech	9	1	0	0	0
Compucare	0	0	0	0	0
John Hancock Health Plans	0	0	0	0	0
Meditech	0	0	0	0	0
Triad	0	0	0	0	0
Pentamation	0	6	0	0	0
Cycare Systems	0	0	0	0	0
Automated Data Processing	0	0	0	0	0
Intermetrics	0	0	0	2	0
Tandem Computers	2	3	1	0	0
Perot Systems	11	0	23	0	0
Babcock & Wilcox	0	0	0	0	6
Compugraphic	8	0	0	0	0
EI International	0	0	0	0	3
DST Systems	0	0	0	0	0

EXHIBIT II-2 (CONT.)

VENDOR	MEDIA TOTAL	SCHOOLS TOTAL	STATE & LOCAL GOVERNMENT TOTAL	TRANSPORTATION TOTAL	UTILITIES TOTAL
XEROX Computer Services	5	0	2	0	0
GEIS Co	3	1	10	0	2
Teknekron	0	0	0	0	0
May & Speh	3	1	0	0	0
Effective Management	0	0	0	0	0
XL/Systems	0	0	0	0	0
Logicon	0	0	0	0	0
Comtex	1	0	0	0	0
Computer Curriculum Corporation	0	4	0	0	0
Compuware	2	1	2	1	1
Fiserv	0	0	0	0	0
Groupe Bull	15	7	23	0	4
Apple Computer	0	6	6	0	0
Adia	0	0	0	1	3
Automated Business Systems	2	1	0	0	0
Brandon Systems	0	0	3	0	4
Centel	0	0	0	0	0
Computer Associates Inc.	2	4	8	0	3
Covia	4	1	3	63	0
Technicon	0	0	0	0	0
Data General	0	0	6	0	2
Technalysis	1	0	3	1	0
Dun & Bradstreet	4	2	6	0	0
McKinsey	8	0	16	0	0
Affiliated	13	2	0	10	0
Shared Financial	0	0	0	0	0
Global Info. Systems Technology	0	2	8	0	0
ISI	0	0	0	0	0
McGraw-Hill, Inc.	1	2	2	0	0
Mellon Bank	0	0	1	0	0
Merrill Corporation	2	0	1	0	0
First Financial Mgmt.	0	0	0	2	0
Cadence	0	0	0	0	0
National Computer Systems	0	2	0	0	0
TSC	0	0	1	1	1
Newtrend Group	0	0	0	0	0
On-Line Computer Library Center	0	0	0	0	0
Wicat	3	14	3	0	0
Ross	3	0	3	2	1
Security Pacific Corporation	0	0	0	0	0
Systematics	0	0	0	0	0
Total Systems Services	0	0	0	0	0
Fujitsu	0	0	0	0	0
Network Systems	1	0	1	0	1
IMI	0	0	0	0	0
RCG	4	0	10	0	1
SAP America	1	0	0	0	0
Warner	1	0	0	0	0
MCI	1	0	4	0	0
Computerland	4	3	7	0	1
ERI	0	0	5	0	9

EXHIBIT II-2 (CONT.)

VENDOR	WHOLESALE DISTRIBUTION TOTAL	RETAIL DISTRIBUTION TOTAL	FINANCE TOTAL	INSURANCE TOTAL	SECURITIES TOTAL
TOTAL MARKET ($M)	974	1381	4262	2969	883
TOTAL ACCOUNTED (%)	60%	59%	55%	53%	55%
International Business Machines	82	74	145	127	33
Andersen Consulting	50	72	111	120	26
Computer Sciences Corporation	51	50	87	93	13
Electronic Data Systems	61	86	195	516	21
Unisys	17	29	46	14	6
Systems Applications Int'n'l Corp.	0	0	14	0	0
Digital Equipment	34	46	53	34	19
Martin Marietta Info. Systems	25	31	0	0	0
Boeing Computer Services	0	0	0	8	0
AGS Computers/NYNEX	5	11	31	8	5
BDM International	2	0	0	0	0
McDonnell Douglas Systems Integration	0	0	0	0	0
Arthur D. Little	14	0	0	17	0
Planning Research Corporation/ATI	0	4	5	4	1
CDC;Ceridian	11	16	6	15	0
Computer Task Group	8	0	6	14	4
Deloitte & Touche	9	2	4	13	3
SUN	0	2	7	3	5
KPMG (Peat Marwick)	4	7	23	16	2
Cap Gemini America	0	0	43	32	5
Price Waterhouse	0	3	8	13	0
National Education Corporation	4	4	16	13	7
Grumman Data Systems	2	0	5	0	2
American Management Systems	0	0	21	0	0
TRW, Inc.	0	15	74	14	8
Cincinnati Bell Information Services	0	4	4	3	0
Coopers & Lybrand	10	13	14	7	1
Ernst & Young	16	18	15	28	5
SHL Systemhouse	5	3	2	0	2
DMR	9	0	0	17	0
Analysts International	0	13	7	8	2
CACI, Inc.	6	0	2	3	0
Bechtel Information Technology	0	0	0	0	0
Analytical Sciences Corp. (The)	7	0	2	0	0
Computer Horizons	9	2	5	0	1
COMARCO	0	0	0	0	0
Comp. Data Sys (US West)	0	0	0	0	0
Telos Corp.	0	0	0	0	0
Moore DB Services	0	0	3	0	0
Keane, Inc.	0	1	4	17	1
Syscon Corporation	0	0	0	0	0
Fluor	0	0	0	0	0
Policy Management Systems	0	0	0	85	0
Lockheed	0	0	0	0	0
Bolt Beranek And Newman	0	0	4	4	2
Comshare	0	0	0	0	2
Computer Power Group Americas	0	0	6	2	0
Harris	0	0	0	0	0
Booz, Allen & Hamilton	4	3	10	4	5

EXHIBIT II-2 (CONT.)

VENDOR	WHOLESALE DISTRIBUTION TOTAL	RETAIL DISTRIBUTION TOTAL	FINANCE TOTAL	INSURANCE TOTAL	SECURITIES TOTAL
Continuum Company (The)	0	0	0	52	0
Oracle Complex Systems	0	3	8	7	4
Wang Laboratories	0	0	5	15	1
Dynamics Research	0	0	0	0	0
Litton Computer Services	7	12	3	4	0
SEI Corporation	0	0	141	0	0
Sterling Software	2	6	0	0	0
General Instruments	0	0	0	0	0
Systems & Computer Technology	4	0	0	0	0
Logica/Data Architects	0	0	16	7	2
Power Computing	2	2	4	0	0
HBO & Company	0	0	0	0	0
Computervision	0	0	0	0	0
Texas Instruments	0	0	6	0	1
Securities Industry Automation	0	0	26	0	145
AT&T/NCR	24	42	11	7	4
MARC, Inc.	0	0	5	0	0
Metier Management	0	0	0	0	0
Agway	3	6	0	0	0
SAS Institute	0	0	2	0	0
Deere Technical Services	0	0	0	0	0
Symantec	5	11	2	0	0
ASK Computer Systems	0	0	0	0	0
GTE	2	16	3	4	0
Disclosure, Inc.	0	0	0	0	39
Genix	4	8	3	6	0
Softech, Inc.	0	0	0	0	0
Shared Medical Systems	0	0	0	0	0
Combustion Engineering	0	0	0	0	0
Citicorp Information Resources	0	0	0	0	10
Hewlett-Packard	12	7	14	15	4
Allen-Bradley	0	2	0	2	0
CAPSO PALLM Systems	0	0	0	16	0
First Data Resources	0	0	22	2	4
Baxter-Travenol Laboratories	0	0	0	0	0
VISA USA	0	0	2	0	5
American Software	4	3	4	0	0
Ameritech	0	0	5	0	0
Compucare	0	0	0	0	0
John Hancock Health Plans	0	0	0	4	0
Meditech	0	0	0	0	0
Triad	2	5	0	0	0
Pentamation	2	0	0	0	0
Cycare Systems	0	0	0	0	0
Automated Data Processing	0	0	3	0	9
Intermetrics	0	0	0	2	0
Tandem Computers	4	2	9	5	11
Perot Systems	2	3	31	46	0
Babcock & Wilcox	0	0	0	0	0
Compugraphic	0	0	0	0	0
EI International	0	0	0	0	0
DST Systems	0	0	71	0	4

EXHIBIT II-2 (CONT.)

VENDOR	WHOLESALE DISTRIBUTION TOTAL	RETAIL DISTRIBUTION TOTAL	FINANCE TOTAL	INSURANCE TOTAL	SECURITIES TOTAL
XEROX Computer Services	0	0	0	0	0
GEIS Co	5	12	20	8	0
Teknekron	0	0	8	0	5
May & Speh	2	0	4	0	0
Effective Management	2	2	0	0	0
XL/Systems	8	7	0	0	0
Logicon	0	0	0	0	0
Comtex	0	0	21	0	6
Computer Curriculum Corporation	0	0	0	0	0
Compuware	2	2	2	2	1
Fiserv	0	0	147	4	0
Groupe Bull	8	12	10	4	5
Apple Computer	0	0	0	0	0
Adia	3	0	2	6	0
Automated Business Systems	0	2	0	0	0
Brandon Systems	0	0	20	3	1
Centel	0	0	0	0	0
Computer Associates Inc.	3	4	15	0	2
Covia	4	3	0	0	0
Technicon	0	0	0	0	0
Data General	0	0	11	4	6
Technalysis	0	5	10	0	0
Dun & Bradstreet	3	5	7	0	0
McKinsey	0	1	25	12	3
Affiliated	2	35	137	0	2
Shared Financial	0	3	22	0	4
Global Info. Systems Technology	0	1	0	0	0
ISI	0	0	0	24	0
McGraw-Hill, Inc.	0	0	0	0	0
Mellon Bank	0	0	55	0	1
Merrill Corporation	0	0	0	0	0
First Financial Mgmt.	0	58	147	5	0
Cadence	0	0	0	0	0
National Computer Systems	0	0	17	0	0
TSC	0	1	15	0	0
Newtrend Group	0	0	11	0	0
On-Line Computer Library Center	0	0	0	0	0
Wicat	0	0	0	0	0
Ross	3	1	2	0	0
Security Pacific Corporation	0	0	15	0	11
Systematics	0	0	190	0	0
Total Systems Services	0	0	7	0	0
Fujitsu	2	0	12	0	0
Network Systems	2	0	2	0	2
IMI	0	10	5	8	1
RCG	7	9	17	23	5
SAP America	0	0	0	0	0
Warner	0	0	0	28	2
MCI	1	4	0	0	4
Computerland	3	4	5	0	1
ERI	0	3	2	0	0

EXHIBIT II-2 (CONT.)

VENDOR	FEDERAL GOVERNMENT TOTAL	GRAND TOTAL TOTAL
TOTAL MARKET ($M)	5722	35545
TOTAL ACCOUNTED (%)	67%	58%
International Business Machines	483	1950
Andersen Consulting	50	1263
Computer Sciences Corporation	516	1525.8
Electronic Data Systems	541	2599
Unisys	109	457.4
Systems Applications Int'n'l Corp.	295	371
Digital Equipment	81	895.2
Martin Marietta Info. Systems	309	425
Boeing Computer Services	74	132
AGS Computers/NYNEX	0	219
BDM International	161	244
McDonnell Douglas Systems Integration	0	0
Arthur D. Little	0	173
Planning Research Corporation/ATI	228	421
CDC;Ceridian	7	143
Computer Task Group	0	237.7
Deloitte & Touche	0	157
SUN	0	50
KPMG (Peat Marwick)	0	171
Cap Gemini America	0	206.8
Price Waterhouse	10	96
National Education Corporation	0	133
Grumman Data Systems	103	222
American Management Systems	39	149.4
TRW, Inc.	23	174
Cincinnati Bell Information Services	4	123.3
Coopers & Lybrand	0	211.4
Ernst & Young	0	225
SHL Systemhouse	13	114
DMR	0	53
Analysts International	0	147
CACI, Inc.	44	88.2
Bechtel Information Technology	3	68
Analytical Sciences Corp. (The)	0	28
Computer Horizons	0	98
COMARCO	48	61
Comp. Data Sys (US West)	52	101
Telos Corp.	50	74
Moore DB Services	0	13
Keane, Inc.	0	109
Syscon Corporation	93	111
Fluor	0	27
Policy Management Systems	0	85
Lockheed	3	44
Bolt Beranek And Newman	55	102
Comshare	0	33
Computer Power Group Americas	0	65
Harris	0	75
Booz, Allen & Hamilton	0	113

EXHIBIT II-2 (CONT.)

VENDOR	FEDERAL GOVERNMENT TOTAL	GRAND TOTAL TOTAL
Continuum Company (The)	0	52
Oracle Complex Systems	0	75
Wang Laboratories	0	73
Dynamics Research	17	18
Litton Computer Services	8	66
SEI Corporation	0	141
Sterling Software	16	31
General Instruments	0	28
Systems & Computer Technology	0	107
Logica/Data Architects	0	39.6
Power Computing	0	45
HBO & Company	0	77
Computervision	0	97
Texas Instruments	0	56.4
Securities Industry Automation	0	171
AT&T/NCR	0	257
MARC, Inc.	0	24
Metier Management	0	33
Agway	0	37
SAS Institute	0	18
Deere Technical Services	0	11
Symantec	0	23
ASK Computer Systems	0	32
GTE	0	75
Disclosure, Inc.	0	40
Genix	0	75
Softech, Inc.	40	47
Shared Medical Systems	0	226
Combustion Engineering	0	15
Citicorp Information Resources	0	11
Hewlett-Packard	15	228
Allen-Bradley	0	64
CAPSO PALLM Systems	0	16
First Data Resources	0	134
Baxter-Travenol Laboratories	0	18
VISA USA	0	7
American Software	0	44
Ameritech	0	21
Compucare	0	29
John Hancock Health Plans	0	28
Meditech	0	21
Triad	0	9
Pentamation	0	13
Cycare Systems	0	33
Automated Data Processing	0	12
Intermetrics	0	24
Tandem Computers	0	57
Perot Systems	0	208
Babcock & Wilcox	0	19
Compugraphic	0	8
EI International	0	4
DST Systems	0	75

EXHIBIT II-2 (CONT.)

VENDOR	FEDERAL GOVERNMENT TOTAL	GRAND TOTAL TOTAL
XEROX Computer Services	0	22
GEIS Co	0	89
Teknekron	0	13
May & Speh	0	14.5
Effective Management	0	7
XL/Systems	0	39
Logicon	262	273
Comtex	0	29
Computer Curriculum Corporation	0	5
Compuware	0	31
Fiserv	0	151
Groupe Bull	0	140
Apple Computer	0	23
Adia	0	33
Automated Business Systems	0	8
Brandon Systems	0	40
Centel	73	78
Computer Associates Inc.	0	83
Covia	0	83
Technicon	0	34
Data General	0	46
Technalysis	0	26
Dun & Bradstreet	0	40
McKinsey	0	126
Affiliated	0	218
Shared Financial	0	29
Global Info. Systems Technology	0	13
ISI	0	30
McGraw-Hill, Inc.	0	7
Mellon Bank	0	57
Merrill Corporation	0	3
First Financial Mgmt.	0	237
Cadence	0	28
National Computer Systems	0	28
TSC	0	103
Newtrend Group	0	11
On-Line Computer Library Center	0	48
Wicat	0	29
Ross	0	22
Security Pacific Corporation	0	29
Systematics	0	190
Total Systems Services	0	7
Fujitsu	0	53
Network Systems	0	29
IMI	0	34
RCG	0	102
SAP America	0	16
Warner	0	34
MCI	0	23
Computerland	0	39
ERI	0	21

D
Forecast Reconciliation

1. Reconciliation of the Professional Services Industry

Data Base Reconciliation, 1991-1992

The 1992 report forecast a 1992 professional services industry totalling $19,412 million. Actual 1992 professional services industry size was $19,505 million, a difference of less than 1%.

The five year growth rate changed from 8% to 9%, reflecting the following trends:

- A slight improvement in economic growth in the forecast period.
- A slight shift in consulting and software development toward systems integration-based services.
- Greater use of system software products/software engineering and application software products which make use of software engineering for customization.

2. Reconciliation of Systems Integration Market

The commercial and federal systems integration markets saw a variety of forces affecting the rates of growth since the INPUT forecast for 1992. The INPUT forecast for the SI market in 1992 was $4,053 million (excluding equipment). The actual total was $4,442 million, an increase of almost 10%, reflecting mounting pressure to re-engineer business functions and upgrade application systems.

3. Reconciliation of Systems Operations Market

The original systems operations forecast for 1992 was $9,658 million; the actual 1992 level was $11,705 million, which was 22% larger. This was due to increasing pressure to reduce the impact of information technology costs in current periods as well as the increasing need to fund sources of expertise in newer technology utilized in desktop (workstation) and network technology.

Other reasons for continued growth in systems operations overall include the shift away from ad hoc processing services toward more integrated processing of a firm's suite of applications. This shift requires the kind of long-term commitment which is the basis of the systems operations business.

Blank

Industry Analyses

A
Manufacturing

1. Professional Services-Related Industry Issues

Issues shared with other industries include increasing use of client/server technology, LANs, and networks connecting business units with each other and with clients or suppliers to handle EDI or queries on goods, supplies and shipments; reengineering of business application systems; and expansion and/or integration of networks. There are also common issues in regard to pressures to reduce costs, improve quality and productivity, speed up processing of orders and other transactions, and improve service. The use of systems operation is also being considered or used as in many other vertical markets.

Unique issues in manufacturing or those shared with a small number of other industries include improvement or reengineering of manufacturing systems, investigation and/or use of flexible manufacturing concepts, further automation of warehouse and inventory systems, and greater attention to means of monitoring customer problems. The use of imaging applications and work group computing are also becoming issues.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
Andersen Consulting	Systems Operations	Dial Mfg.	$10
DEC	Systems Integration	Toys R Us	Prop.
PeopleSoft	Customize Human Resource	Toys R Us	Prop.
PRC	Systems Integration	Black & Decker	$20
Genix	Systems Operations	American Standard	$500
DEC	Systems Integration	Eastman Kodak	$50
Andersen Consulting	Systems Integration	Timken	$125

B

Automotive Manufacturing

1. Professional Services-Related Industry Issues

For automotive manufacturing, issues shared with other industries include interest in improving ordering and distribution; finding means of increasing quality, lowering costs and improving productivity; increasing use of client/server technology and open systems; and considering or using systems operations services. The expansion in use of EDI and networks and the need to integrate networks are also shared issues.

Unique issues in automotive manufacturing or those shared with a small number of other industries include improvement of manufacturing and CAD/CAM systems, investigation and/or use of flexible manufacturing concepts, and greater attention to means of monitoring customer problems. The use of imaging applications and work group computing are also becoming issues.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
Perot	Systems Operations	Volkswagen of Amer.	$100
Unisys	Systems Integration	Ford	$30
EDS	Systems Integration / Systems Operation	Cummins Engine	$150
Unisys	Systems Operations	Subaru	$45

C

Aerospace

1. Professional Services-Related Industry Issues

The major issues that Aerospace shares with other industries includes lowering costs and increasing productivity, responding to increasing competition, improving quality, increasing use of client/servers and LANs and increasing use of open systems. The consideration or use of systems operations is also a shared issue.

Issues that are unique or shared with a small number of other industries include means of maintaining productive capabilities while reducing or eliminating workers and functions. Other unique issues include the use of electronic information to describe parts that can be sent directly to automatic equipment.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
SHL	Systems Operation-Mfg./Fin. Applications	Pneumo Abex Corp.	$3.5
Andersen Consulting	Implement mgmt and administrative system	Jet Propuls. Lab	$10.2
IBM	Systems Integration	McDonnell Douglas	$3000
CSC	Systems Operations	General Dynamics	$3000
EDS	Systems Operations	Northrop	$15

D
Electrical Machinery

1. Professional Services-Related Industry Issues

Issues shared with other industries include increasing use of client/server technology, LANs, and networks connecting business units with each other and with clients or suppliers to handle EDI or queries on supplies or shipments; upgrading business application systems; and expansion and/or integration of networks. There are also common issues in regard to pressures to reduce costs, improve quality and productivity, speed up processing of orders and other transactions, and improve service.

Unique issues in electrical machinery or those shared with a small number of other industries include improvement or reengineering of manufacturing systems, investigation and/or use of flexible manufacturing concepts, further automation of warehouse and inventory systems, and greater attention to means of monitoring customer problems. The use of imaging applications and work group computing are also being introduced.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
Genix	Systems Operations	Bailey Controls	$4
Power Systems	Systems Operations	Combustion Eng.	$2
Genix	Systems Operations	Plessey Electronics	$2.4
EDS	Electronics Mfg. System	Signetics	$100

E

Construction

1. Professional Services-Related Industry Issues

The issues shared with other vertical markets include pressure to reduce and control costs and increase productivity and interest in using client/server technology and open systems. Shared issues also include upgrading application systems and expanding networks.

Unique issues or those shared with a small number of other markets include expanding the use of automation to smaller firms, upgrading means of estimating and managing projects, and meeting needs for IS equipment and skills despite the depressed condition of the construction industry.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
EDS	Systems Operations	Meredith Construction	$10
SHL	Client/Server Systems Operations	Fluor Daniel	$10

F

Process Manufacturing

1. Professional Services-Related Industry Issues

Issues shared with other industries include a desire for reduction in costs and improved productivity, increasing use of networks, integration of networks and data bases, dealing with shortages of higher level IS personnel, handling mergers and acquisitions, and considering or using outsourcing.

Issues that are unique or shared with a few other industries include acquiring or developing more integrated application systems that handle accounting as well as processing operations, integrating more functions through the use of workstations and LANs or specialized IT equipment, and optimizing plant performance or relocating functions to take advantage of environmental situations.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
Genix	Systems Operations	Wheeling Pittsburgh Steel	$2.5
Mellon	Systems Operations	National Steel	$300
EDS	Systems Operations	Bethlehem Steel	$500
CSC	Systems Operations	WCI	$64

G
Consumer Goods

1. Professional Services-Related Industry Issues

Issues shared with other industries include pressure to reduce costs and improve productivity, increase use of networks, integrate application systems and data bases, deal with shortages of higher level IS personnel, accommodate mergers and acquisitions, and consider or use outsourcing of IS functions.

Issues that are unique or shared with a few other industries include acquiring or developing more integrated application systems, integrating more functions through the use of workstations and LANs or specialized IT equipment, upgrading inventory and warehouse logistics, and optimizing plant performance or relocating functions to take advantage of environmental situations.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
Genix	Systems Operations	Heinz	$8
Ross	SI; Process Mgmt.	Moyer Packing	$2
Andersen	Systems Integration	Heinz	$10
Genix	Systems Operations	American Tobacco	$14
Martin Marietta	Inventory Mgmt.	Monarch	$20

H

Chemicals/Pharmaceuticals

1. Professional Services-Related Industry Issues

The issues of concern shared with other vertical markets include improvement of productivity, cost reduction, greater use of networks, integration of networks and data bases, overcoming shortages of higher level IS personnel and considering or using outsourcing. Other shared issues include dealing with mergers and acquisitions and providing information that enables performance to be analyzed more fully.

Issues that are unique or shared with a few other industries include acquiring or developing more integrated application systems that handle accounting as well as processing operations, integrating more functions through the use of workstations and LANs or specialized IT equipment, and optimizing plant performance or relocating functions to take advantage of environmental situations.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
RMA Assoc.	Automation of Admin.	Hoechst Inc.	Prop.
Ross	SI; Customize Process Mgmt. System	DuPont	$2.5
Corporate SW	SO; Desktop Support	Pfizer	Prop.
CSC	Medicaid Reimbursement System	Eli Lilly	Prop.

I Petroleum

1. Professional Services-Related Industry Issues

Issues that Petroleum shares with other vertical markets include improvement of productivity, cost reduction, integration of networks and data bases, overcoming shortages of higher level IS personnel and considering or using outsourcing. Other shared issues include providing information that enables performance to be analyzed more fully and increasing use of client/server technology and open systems.

Issues that are unique or shared with a few other industries include acquiring or developing more integrated application systems that handle accounting as well as processing operations, integrating more functions through the use of workstations and LANs or specialized IT equipment, and optimizing plant performance or relocating functions.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
SHL	Systems Operations	Amoco	$90
Andersen Consulting	System Development	Arco Oil & Gas	$18
Andersen Consulting	Systems Integration	Sun Oil	$175
Andersen Consulting	Systems Operations	Sun Oil	$200
Power Systems	Systems Operations	Beacon Oil	$8
EDS	Systems Operations	Placid Oil	$20

J
Rubber/Glass/Minerals

1. Professional Services-Related Industry Issues

Issues that are shared with other industries include pressures to reduce costs and increase productivity, expand and integrate networks, utilize client/server technology and open systems to a greater extent, and overcome shortages of IS expertise. The consideration or use of systems operations is also a shared issue.

Issues that are unique or shared with a small number of other markets include the expansion of MRP II types of systems, upgrading of financial reporting, and improvement of applications involving transportation and storage.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
EDS	Systems Operations	Cyprus Minerals	$16
Power Systems	Systems Operations	Santa Fe Minerals	$3
EDS	Systems Operations	Anchor Glass	$30

K
Communications

1. Professional Services-Related Industry Issues

Among the issues shared with other vertical markets are dealing with new technology, reducing costs, improving productivity, upgrading customer service functions and billing, integrating application systems and data bases, and dealing with shortages of higher level IS personnel.

Unique issues or those shared with a small number of other markets include upgrading inventory and procurement application systems, handling interfaces between the services of communication companies, handling massive files of data, and dealing with the increasing complexity of switching data.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
Gemini Consulting	Systems Planning	Bell Atlantic	Prop.
RCG	System Development	AT&T	Prop.
Gemini Consulting	Systems Planning	SNET	Prop.
Power Systems	Implement Storage System	Bell Atlantic	Prop.

L
Computer Services

1. Professional Services-Related Industry Issues

Issues shared with other markets include pressures to reduce costs, improve productivity and service, expand network capabilities and handle shortages of higher level IS personnel. Other shared issues include handling mergers and acquisitions, and meeting increasing needs for customization.

Issues that are unique or shared with a small number of other industries include responding to the trends involving the use of client/server technology, downsizing and open systems, expanding services and updating products regularly to keep clients, and to meet expanding needs or interest in new IT such as imaging systems or parallel architecture.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)	
Genix	Systems Operations		Comshare	Prop.
Cobra Group	Customization planning		Computer Assoc.	Prop.
Micrognosis	Trading system project		Quotron System.	Prop.

M

Consultants

1. Professional Services-Related Industry Issues

Issues shared with other verticals include increasing productivity, expanding use of client/server technology, dealing with constant improvements in the use of IT, reducing costs and meeting shortages in higher level IS skills.

Unique issues or those shared with only a few other industries include continuing needs to improve office automation and communication services to improve client service.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
Dun & Bradstreet	Software customization	Ernst & Young	Prop.
Asset Group	VINES Network	Heller,Ehrman,White & MacCauliffe	Prop.
SUN Microsystems	Network	Avis Info Systems	$5

N

Health

1. Professional Services-Related Industry Issues

Issues shared with other vertical markets include pressures to control and reduce costs, improve productivity and service, integrate application systems, improve network capabilities, handle shortages of higher level IS personnel, and explore outsourcing and processing services that can reduce IS costs and improve services.

Unique issues or those shared with a small number of other vertical markets include the need to customize operational systems to meet the conditions of different types of health practices and the relations between health organizations and government as well as academic institutions. The reorganizations of many hospitals and other health facilities that involved separating processing and other information services work from the organization or making it a separate subsidiary has also been an issue.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
SMS	Enhanced Medical System	Sloan Kettering	Prop.
Perot	Info. System	TX Children's Hospital	Prop.

O

Higher Education

1. Professional Services-Related Industry Issues

The issues shared with other verticals include dealing with new technology, reducing costs, upgrading and integrating application systems and databases, dealing with shortages of higher level IS personnel, and meeting the reporting needs of government organizations.

Unique issues include developing application systems that help to track and manage fund raising and student financial arrangements and payments. Other unique issues include participating in shared networks, joint IS projects, and arrangements with IT vendors that are interested in the institution.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
CDC	Massive Storage Imple.	Carnegie Mellon	Prop.
DMR	Systems Methodology Consulting	MIT	Prop.
HP	SI; Optical Storage Data Base	UC at Berkeley	Prop.
SCT	Systems Operations	G.Washington U.	$42
IBM/DEC	UNIX Network	MIT	$100

P
Media

1. Professional Services-Related Industry Issues

Issues shared with other vertical markets include pressure to reduce costs, increase productivity, deal with mergers and acquisitions, and meet government reporting requirements. Other shared issues include improving financial reporting / analysis and customer services as well as considering or engaging in the use of systems operations.

Issues that are unique or shared with a small number of other markets include developing more multimedia offerings, upgrading list management applications, and automating more functions in a number of companies.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
SHL	Systems Integration	Washington Post	Prop.
Genix	Systems Operations	Scrips Howard Pub.	Prop.

Q
Schools

1. Professional Services-Related Industry Issues

Issues that schools share with other vertical markets include updating and integrating application systems and databases as well as reducing costs and improving service capabilities.

Issues unique to schools or a small number of other vertical markets include pressure to upgrade information technology in use and utilize new types of educational software products.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
US Air Force	Intelligent Tutor Network	Rome School Dist	Prop.

R

State/Local Government

1. Professional Services-Related Industry Issues

The issues that are shared with other vertical markets include reducing costs and increasing productivity, implementing improvements in customer services, expanding and upgrading networks, and dealing with shortages of high level IS personnel.

Issues unique to this market or a small number of markets include growing use of imaging for personal records, reduction in federal funds and long decision cycles before initiating some projects.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
Ernst & Young	SI; Financial System	NY Urban Dev.Corp.	Prop.
Andersen Consulting	EIS & DSS / Accounting Systems -SI/SO	Texas	$2.6
Andersen Consulting	SI; Human Resources System	Montana	$15.5
IBM/Mentor	Indexing / Imaging Project	Jefferson County, KY	Prop.

S

Transportation

1. Professional Services-Related Industry Issues

Issues shared with other markets include pressure to reduce costs and cut back capabilities, improve productivity and customer services, deal with mergers and acquisitions, upgrade systems to meet changing market conditions, and meet needs for higher level IS capabilities. Other shared issues include needs to stay current in the use of credit card technology.

Unique issues or those shared with a small number of other industries include needs to meet changing regulatory and government reporting requirements, restructure operations and services as well as prices when needed to meet competition, and to upgrade travel agent and freight systems.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
AMRIS	Systems Operations	Alaska Airlines	Prop.
IBM	SI; Conversion to UNIX	DHL	Prop.
Andersen Consulting	SI; Aircraft Main.	Delta	Prop.
Andersen Consulting	SI; Ticket Audit / Marketing System	Northwest Airlines	Prop.

T
Utilities

1. Professional Services-Related Industry Issues

Among the issues shared by utilities with other markets are pressure to reduce costs, improve productivity and customer service, further integrate application systems and databases, overcome shortages of higher level IS skills and expand networks linking functions within utilities.

Issues that are unique to utilities or to a small number of markets are needs for further integration of purchasing and material management, upgrading of plants and equipment, and improvement of systems for monitoring the use of nuclear energy as well as other fuels.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
DEC	Systems Operations	Trans Alta	$150
CDC	SO; Storage Mgmt.	TVA	Prop.
Andersen Consulting	SI; Plant Main. System	Texas Util.	$1.5

U

Wholesale Distribution

1. Professional Services-Related Industry Issues

Issues shared with other vertical markets include pressures to reduce costs, increase productivity, improve service, downsize major applications to midrange or workstation systems, increase use of client/server technology and LANs and increase transaction processing capabilities. Other common issues include increasing use of EDI, introducing or expanding use of open systems, and overcoming shortages of IS personnel with higher levels of network and other skills.

Issues that are unique or shared with a few industries include paying more attention to the financial and business impact of logistics in warehouse operations and shipping, expanding use of bar code technology in shipping and receiving goods.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
CSC	Systems Operations; Logistics / Warehousing	British Home Stores	Prop.
Andersen Consulting	Systems Integration	Revlon Distrib.	$9

V
Retail Distribution

1. Professional Services-Related Industry Issues

The issues shared with other vertical markets include pressure to reduce costs, improve some aspects of customer service, expand network capabilities with suppliers, use barcode technology wherever possible, expand use of EDI, integrate applications and databases, and consider outsourcing as a means of meeting needs for high level IS personnel and/or reducing IS costs and investment.

One of the unique issues of a group of retailers is improving application systems to handle a large scale of operations including faster turnover of goods and special ordering conditions. Other issues that are unique or shared with a small number of other markets include improving merchandising and material handling systems, expanding or introducing electronic capture of card transactions and implementing systems capabilities that will make use of data or services of suppliers. There are also unique needs in terms of collecting more data on consumer activity and supporting electronic couponing and other incentive programs.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
ISSC	Systems Operations	Hertz	Prop.
Genix	Systems Operations	Gantos	$11
IBM	SI; Downsizing to UNIX Servers	Marriott	Prop.
CSC	Systems Integration	Pearle Vision	$20
EDS	Systems Operations	Montgomery Ward	$100

W

Finance

1. Professional Services-Related Industry Issues

For the finance market, the issues shared with other vertical markets includes pressure to expand the use of LANs and client/server technology, reduce costs through consolidation of existing centers and distribution of work to end-user areas as well as through elimination or reduction of other functions, integrate or link databases and networks, increase use of EDI and overcome shortages of higher level IS skills. Other shared issues include dealing with mergers and acquisitions and changing government regulatory and reporting requirements. An issue which is increasing in importance in finance as well as in other vertical markets regards the consideration or use of vendor outsourcing.

Unique issues or those shared with only a small number of other industries include supporting new types of investment and card based products as well as combinations of services for customers, reorganizing or restructuring operations to accommodate mergers or changing economic conditions, and meeting the needs of expanding global financial markets.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
Systematics	Systems Operations	Nations Bank	$10
Unisys	Systems Operations	CA Republic of Bakersfield	$56
Booz Allen	Internat'l Systems Project Management	Chase Manhattan.	$2
IBM	SI; Network Integration	Barnett	Prop.
Systematics	Systems Operations	Liberty Nat'l Bancorp	$20
Fiserv	Systems Operations	Community Fed.	$12
IBM	Systems Integration	First American National	$25

X
Insurance

1. Professional Services-Related Industry Issues

The issues which insurance shares with other vertical markets include pressures for cost reduction and increased productivity, improvement of customer service, meeting shortages of higher level IS skills, and increased consideration or use of outsourcing.

Issues that are unique or shared with a small number of other verticals include overcoming a number of recent natural disasters that involved large insurance claims, meeting government reporting requirements, and providing more network services to independent and captive agents.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
ISSC	Systems Operations	Equifax	Prop.
EDS	Systems Operations	Fremont Genl	Prop.
CSC	Systems Operations	AMP Society	Prop.
Andersen Consulting	Systems Development; Investment Mgmt.	Aetna	Prop.

Y
Securities

1. Professional Services-Related Industry Issues

Issues shared by the securities market and other vertical markets include pressures for cost reduction and increased productivity, increasing use of client/server technology and LANs, improvement of customer service, integration of networks and data bases, supporting new products and services, meeting shortages of higher level IS skills, and increased consideration or use of outsourcing.

Issues that are unique or shared with a few other industries include providing more network services to clients, supporting an increasing level of global services, and meeting the need of new and increasingly complex trading services.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
ADP	Enhancing Broker Workstation	Merrill Lynch	Prop.
Comtex	Trading Project	Paine Webber	Prop.
Network Eq. Tech.	Frame Relay Network	Paine Webber	$2.3

Z
Federal Government

1. Professional Services-Related Industry Issues

The issues which the federal government shares with other vertical markets includes the need to provide reductions in costs and staffs and increases in productivity as well as to integrate networks and data bases and upgrade application systems to provide more timely and useful information. Other shared issues involve overcoming shortages of higher level IS skills and increasing use of electronic information including EDI.

Issues that are unique or shared with a few other industries include meeting changes in mandated contracting requirements and supplying new information needs resulting from the change in administration as well as achieving higher levels of software standards. The most significant unique need is adjusting expenditures to meet changes in government funding particularly in defense.

2. Exemplary Contracts

Vendor(s)	Project	Customer	Value ($M)
Unisys	SO (Platform) / Network Mgmt.	Dept. of Energy	Prop.
Unisys	Outsource Application Development / Maintenance	Dept. of Trans.	$201
CSC	Ousourcing System Dev. - Army Info. System	US Army	$44.8
CSC	SI; Automated Land Mgmt.System	Bureau of Land Management	$400
PRC	President's Office Sys.	Executive Office	$21
EDS	Systems Operations	Defense Inform. Sys.	$55

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Table A
INPUT Forecast with Inflation

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	CAGR 92-97
DISCRETE MANUFACTURING									
PROFESSIONAL SERVICES	4459	4879	5343	5851	6403	7011	7676	8430	9%
CONSULTING	1065	1217	1391	1590	1818	2078	2374	2713	14%
SOFTWARE DEVELOPMENT	2734	2911	3101	3303	3517	3748	3994	4255	7%
EDUCATION/TRAINING	660	751	851	958	1068	1185	1308	1462	12%
SYSTEMS OPERATIONS	655	781	938	1126	1364	1656	2012	2456	21%
PLATFORM	229	256	290	327	367	411	460	517	12%
APPLICATIONS	288	351	422	506	617	753	919	1114	21%
NETWORK	78	94	117	145	178	219	270	333	23%
DESKTOP	60	80	109	148	202	273	363	491	35%
SYSTEMS INTEGRATION	624	739	889	1073	1293	1601	1942	2356	21%
SOFTWARE DEVELOPMENT	336	398	479	578	697	862	1046	1269	21%
DESIGN/INTEGRATION	116	137	165	199	240	298	361	438	21%
PROJECT MGMT/CONSULTING	114	135	162	196	236	292	355	431	21%
EDUCATION/TRAINING	28	33	40	48	58	72	87	106	21%
OPERATIONS/MAINTENANCE	30	36	43	52	62	77	93	112	21%
TOTAL	5798	6479	7279	8198	9262	10541	11993	13733	13%
PROCESS MANUFACTURING									
PROFESSIONAL SERVICES	2119	2405	2652	2904	3180	3485	3820	4203	10%
CONSULTING	510	582	665	759	867	991	1131	1292	14%
SOFTWARE DEVELOPMENT	1310	1485	1605	1714	1825	1943	2066	2207	7%
EDUCATION/TRAINING	299	338	382	431	488	551	623	704	13%
SYSTEMS OPERATIONS	766	898	1063	1257	1437	1765	2095	2506	18%
PLATFORM	244	271	309	349	337	438	486	546	12%
APPLICATIONS	361	426	503	593	700	826	975	1151	18%
NETWORK	91	109	127	147	169	196	235	274	17%
DESKTOP	70	92	124	168	231	305	399	535	34%
SYSTEMS INTEGRATION	80	170	190	214	244	282	322	366	14%
SOFTWARE DEVELOPMENT	44	93	104	118	135	154	178	203	14%
DESIGN/INTEGRATION	12	25	28	32	37	42	48	55	14%
PROJECT MGMT/CONSULTING	14	30	34	38	42	50	56	63	13%
EDUCATION/TRAINING	5	11	12	13	15	18	20	23	13%
OPERATIONS/MAINTENANCE	5	11	12	13	15	18	20	23	13%
TOTAL	3035	3565	4029	4543	5092	5837	6636	7610	13%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	CAGR 92-97
TRANSPORTATION									
PROFESSIONAL SERVICES	233	252	271	291	312	331	355	380	7%
CONSULTING	55	61	69	76	83	90	98	108	10%
SOFTWARE DEVELOPMENT	146	156	164	173	185	195	209	222	6%
EDUCATION/TRAINING	32	35	38	42	44	46	48	51	7%
SYSTEMS OPERATIONS	185	215	249	294	342	396	464	548	17%
PLATFORM	96	109	121	135	148	165	183	203	11%
APPLICATIONS	50	58	67	78	91	105	123	143	16%
NETWORK	22	26	32	41	49	56	69	84	22%
DESKTOP	17	22	29	40	54	70	89	118	32%
SYSTEMS INTEGRATION	89	103	124	151	181	224	268	325	21%
SOFTWARE DEVELOPMENT	49	57	68	83	100	123	148	179	21%
DESIGN/INTEGRATION	15	17	21	25	31	38	45	55	21%
PROJECT MGMT/CONSULTING	18	21	25	31	36	45	54	65	21%
EDUCATION/TRAINING	4	5	6	7	8	10	12	14	19%
OPERATIONS/MAINTENANCE	3	3	4	5	6	8	9	11	25%
TOTAL	524	592	673	776	889	1021	1176	1370	15%
UTILITIES									
PROFESSIONAL SERVICES	249	270	291	314	338	364	388	417	8%
CONSULTING	82	89	96	105	114	124	134	145	9%
SOFTWARE DEVELOPMENT	109	116	124	132	141	150	161	172	7%
EDUCATION/TRAINING	58	65	71	77	83	90	93	100	7%
SYSTEMS OPERATIONS	49	55	63	71	83	97	113	132	15%
PLATFORM	27	29	32	35	39	44	49	54	11%
APPLICATIONS	12	14	16	18	21	24	28	32	15%
NETWORK	6	7	8	9	11	12	15	17	16%
DESKTOP	4	5	7	9	12	17	21	28	33%
SYSTEMS INTEGRATION	256	280	316	354	397	446	500	561	12%
SOFTWARE DEVELOPMENT	143	157	177	198	223	250	280	314	12%
DESIGN/INTEGRATION	37	40	45	51	57	64	72	81	12%
PROJECT MGMT/CONSULTING	53	57	65	72	81	91	102	115	12%
EDUCATION/TRAINING	14	16	18	20	22	25	28	31	12%
OPERATIONS/MAINTENANCE	9	10	11	13	14	16	18	20	12%
TOTAL	558	610	677	748	830	924	1022	1139	11%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	CAGR 92-97
TELECOMMUNICATIONS									
PROFESSIONAL SERVICES	1098	1210	1397	1614	1864	2153	2485	2870	15%
CONSULTING	265	306	346	400	461	532	628	725	15%
SOFTWARE DEVELOPMENT	685	750	862	992	1150	1336	1541	1780	15%
EDUCATION/TRAINING	148	154	189	222	253	285	316	365	15%
SYSTEMS OPERATIONS	157	182	211	235	285	333	391	460	17%
PLATFORM	61	68	77	78	99	109	120	134	12%
APPLICATIONS	63	73	85	97	111	128	152	176	16%
NETWORK	19	23	26	29	33	39	46	53	15%
DESKTOP	14	18	23	31	42	57	73	97	32%
SYSTEMS INTEGRATION	125	145	176	212	256	311	377	456	21%
SOFTWARE DEVELOPMENT	70	81	98	118	143	173	210	254	21%
DESIGN/INTEGRATION	20	23	28	34	41	50	61	74	22%
PROJECT MGMT/CONSULTING	24	28	34	41	50	60	73	88	21%
EDUCATION/TRAINING	5	6	7	9	10	13	15	18	20%
OPERATIONS/MAINTENANCE	6	7	9	10	12	15	18	22	21%
TOTAL	1394	1555	1807	2092	2447	2854	3326	3883	16%
RETAIL DISTRIBUTION									
PROFESSIONAL SERVICES	220	238	255	275	295	316	340	365	7%
CONSULTING	53	59	65	72	79	87	96	106	10%
SOFTWARE DEVELOPMENT	137	146	155	165	175	185	196	208	6%
EDUCATION/TRAINING	30	33	35	38	41	44	48	52	8%
SYSTEMS OPERATIONS	289	349	431	533	649	794	962	1184	22%
PLATFORM	123	146	176	211	242	279	323	379	17%
APPLICATIONS	106	127	158	197	244	303	370	458	24%
NETWORK	34	42	52	65	81	101	127	158	25%
DESKTOP	26	34	45	60	82	111	142	189	33%
SYSTEMS INTEGRATION	142	170	206	250	298	364	441	534	21%
SOFTWARE DEVELOPMENT	73	87	105	128	152	186	225	272	21%
DESIGN/INTEGRATION	28	34	41	50	59	72	87	105	21%
PROJECT MGMT/CONSULTING	27	33	40	48	57	70	85	103	21%
EDUCATION/TRAINING	7	8	10	12	15	18	22	27	22%
OPERATIONS/MAINTENANCE	7	8	10	12	15	18	22	27	22%
TOTAL	677	791	937	1118	1324	1585	1885	2272	19%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	CAGR 92-97
WHOLESALE DISTRIBUTION									
PROFESSIONAL SERVICES	351	380	409	439	472	505	542	582	7%
CONSULTING	83	92	102	112	124	135	147	161	10%
SOFTWARE DEVELOPMENT	221	236	250	265	281	298	318	338	6%
EDUCATION/TRAINING	47	52	57	62	67	72	77	83	8%
SYSTEMS OPERATIONS	193	229	265	308	359	423	502	593	17%
PLATFORM	103	118	134	151	168	191	218	246	13%
APPLICATIONS	49	58	66	75	86	98	116	133	15%
NETWORK	23	29	34	41	49	59	71	85	20%
DESKTOP	18	24	31	41	56	75	97	128	32%
SYSTEMS INTEGRATION	86	102	117	137	159	184	215	250	16%
SOFTWARE DEVELOPMENT	46	55	63	74	86	100	116	135	16%
DESIGN/INTEGRATION	16	19	22	25	29	34	39	45	15%
PROJECT MGMT/CONSULTING	16	18	22	26	30	34	40	47	17%
EDUCATION/TRAINING	4	5	5	6	7	8	10	11	15%
OPERATIONS/MAINTENANCE	4	5	5	6	7	8	10	11	15%
TOTAL	648	735	822	925	1046	1187	1356	1553	13%
BANKING AND FINANCE									
PROFESSIONAL SERVICES	2184	2397	2600	2785	2991	3220	3465	3732	8%
CONSULTING	525	576	633	695	763	838	918	1008	10%
SOFTWARE DEVELOPMENT	1360	1495	1612	1703	1806	1922	2047	2180	6%
EDUCATION/TRAINING	299	326	355	387	422	460	500	545	9%
SYSTEMS OPERATIONS	2097	2458	2899	3455	4160	4990	5989	7208	19%
PLATFORM	736	854	982	1129	1298	1493	1732	1995	15%
APPLICATIONS	922	1042	1209	1414	1669	1952	2323	2727	17%
NETWORK	248	310	378	473	591	733	894	1105	24%
DESKTOP	191	252	330	439	602	812	1040	1381	33%
SYSTEMS INTEGRATION	206	265	305	366	433	532	681	822	21%
SOFTWARE DEVELOPMENT	102	131	151	181	215	264	338	409	21%
DESIGN/INTEGRATION	41	53	61	73	86	106	136	164	21%
PROJECT MGMT/CONSULTING	41	53	61	72	86	106	135	163	21%
EDUCATION/TRAINING	11	14	16	20	23	28	36	43	21%
OPERATIONS/MAINTENANCE	11	14	16	20	23	28	36	43	21%
TOTAL	4678	5372	6134	7045	8186	9554	11175	13143	16%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	CAGR 92-97
INSURANCE									
PROFESSIONAL SERVICES	1532	1592	1705	1837	1976	2126	2287	2460	8%
CONSULTING	363	387	423	464	508	556	610	668	10%
SOFTWARE DEVELOPMENT	959	983	1041	1112	1185	1262	1343	1429	6%
EDUCATION/TRAINING	210	222	241	261	283	308	334	362	9%
SYSTEMS OPERATIONS	1056	1224	1421	1662	1948	2297	2709	3205	17%
PLATFORM	416	458	503	564	615	676	764	846	11%
APPLICATIONS	419	490	574	671	785	926	1093	1283	17%
NETWORK	125	153	185	221	266	314	364	433	19%
DESKTOP	96	123	159	206	282	381	488	643	32%
SYSTEMS INTEGRATION	114	157	178	213	258	309	371	441	19%
SOFTWARE DEVELOPMENT	60	82	94	111	135	162	194	230	19%
DESIGN/INTEGRATION	21	31	34	41	49	59	71	84	18%
PROJECT MGMT/CONSULTING	21	26	30	37	44	52	63	75	19%
EDUCATION/TRAINING	6	9	10	12	15	18	22	26	20%
OPERATIONS/MAINTENANCE	6	9	10	12	15	18	21	25	18%
TOTAL	2798	3096	3463	3918	4464	5113	5855	6749	14%
MEDICAL									
PROFESSIONAL SERVICES	272	295	322	354	387	420	460	503	9%
CONSULTING	66	74	84	96	107	120	134	151	13%
SOFTWARE DEVELOPMENT	168	180	193	208	224	239	259	279	8%
EDUCATION/TRAINING	38	41	45	50	56	61	67	74	10%
SYSTEMS OPERATIONS	960	1128	1308	1520	1775	2111	2523	2995	17%
PLATFORM	393	448	502	557	618	686	769	857	11%
APPLICATIONS	366	425	492	571	657	788	954	1121	18%
NETWORK	114	139	160	186	217	256	312	367	18%
DESKTOP	87	116	154	206	283	381	488	650	33%
SYSTEMS INTEGRATION	126	139	157	172	190	212	236	262	11%
SOFTWARE DEVELOPMENT	68	77	86	95	105	117	130	144	11%
DESIGN/INTEGRATION	21	22	25	27	30	34	38	42	12%
PROJECT MGMT/CONSULTING	23	24	28	30	33	37	42	47	12%
EDUCATION/TRAINING	7	8	9	10	11	12	13	14	10%
OPERATIONS/MAINTENANCE	7	8	9	10	11	12	13	14	10%
TOTAL	1445	1678	1941	2252	2635	3124	3707	4412	17%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	CAGR 92-97
EDUCATION									
PROFESSIONAL SERVICES	82	89	97	107	118	131	146	161	10%
CONSULTING	20	22	25	29	33	38	44	51	15%
SOFTWARE DEVELOPMENT	51	54	58	62	68	74	81	88	8%
EDUCATION/TRAINING	11	13	14	16	17	19	21	23	10%
SYSTEMS OPERATIONS	210	244	279	323	377	444	532	627	17%
PLATFORM	45	50	54	60	66	74	83	92	11%
APPLICATIONS	121	140	161	187	217	252	302	352	17%
NETWORK	25	30	33	36	40	45	54	61	12%
DESKTOP	19	24	31	40	54	73	93	122	31%
SYSTEMS INTEGRATION	51	59	68	79	92	113	131	154	17%
SOFTWARE DEVELOPMENT	28	33	37	43	51	62	72	84	17%
DESIGN/INTEGRATION	9	10	12	14	16	20	23	27	18%
PROJECT MGMT/CONSULTING	9	11	12	14	16	20	23	27	16%
EDUCATION/TRAINING	2	2	3	3	4	4	5	6	20%
OPERATIONS/MAINTENANCE	3	3	4	5	5	7	8	10	22%
TOTAL	362	416	475	549	641	761	902	1064	17%
BUSINESS SERVICES									
PROFESSIONAL SERVICES	304	326	350	376	404	434	465	500	7%
CONSULTING	75	83	92	102	113	125	138	153	11%
SOFTWARE DEVELOPMENT	185	197	208	220	232	245	258	272	6%
EDUCATION/TRAINING	44	46	50	54	59	64	69	75	8%
SYSTEMS OPERATIONS	149	181	218	262	319	380	454	549	20%
PLATFORM	44	51	58	65	74	83	95	108	13%
APPLICATIONS	73	89	109	133	162	191	225	271	20%
NETWORK	18	22	26	31	38	46	57	69	21%
DESKTOP	14	19	25	33	45	60	77	102	32%
SYSTEMS INTEGRATION	87	88	107	141	163	202	250	308	23%
SOFTWARE DEVELOPMENT	42	40	49	65	75	92	114	141	23%
DESIGN/INTEGRATION	20	19	23	30	35	43	54	67	23%
PROJECT MGMT/CONSULTING	19	19	23	30	35	43	54	67	23%
EDUCATION/TRAINING	3	5	6	8	9	12	14	17	23%
OPERATIONS/MAINTENANCE	3	5	6	8	9	12	14	17	23%
TOTAL	554	614	700	812	931	1076	1246	1459	15%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	CAGR 92-97
FEDERAL GOVERNMENT									
PROFESSIONAL SERVICES	1900	2098	2349	2494	2661	2850	3040	3275	8%
CONSULTING	409	413	464	491	525	561	586	628	7%
SOFTWARE DEVELOPMENT	1120	1332	1396	1527	1671	1829	2000	2169	8%
EDUCATION/TRAINING	371	353	489	476	465	460	454	477	5%
SYSTEMS OPERATIONS	1770	1989	2240	2523	2956	3345	3675	4159	13%
PLATFORM	563	619	687	763	839	923	1016	1122	10%
APPLICATIONS	836	945	1067	1206	1484	1692	1823	2079	14%
NETWORK	210	237	266	298	336	380	430	484	13%
DESKTOP	161	188	220	256	297	350	406	474	17%
SYSTEMS INTEGRATION	1395	1538	1717	1921	2150	2399	2683	2999	12%
SOFTWARE DEVELOPMENT	725	826	922	1032	1155	1289	1441	1611	12%
DESIGN/INTEGRATION	237	237	265	296	332	370	414	463	12%
PROJECT MGMT/CONSULTING	335	347	387	433	485	541	605	676	12%
EDUCATION/TRAINING	42	78	87	97	108	121	135	151	12%
OPERATIONS/MAINTENANCE	56	50	56	63	70	78	88	99	12%
TOTAL	5226	5813	6526	7194	8064	8944	9804	10907	11%
STATE & LOCAL GOVERNMENT									
PROFESSIONAL SERVICES	2638	2942	3252	3744	4295	4919	5546	6300	14%
CONSULTING	635	714	847	978	1130	1305	1508	1751	16%
SOFTWARE DEVELOPMENT	1616	1806	1946	2269	2605	2932	3211	3603	12%
EDUCATION/TRAINING	387	422	459	497	560	682	827	946	14%
SYSTEMS OPERATIONS	1500	1752	2043	2398	2840	3369	4078	4866	18%
PLATFORM	357	407	456	511	567	629	698	778	11%
APPLICATIONS	829	953	1096	1272	1475	1711	2088	2443	17%
NETWORK	178	217	265	323	398	489	601	737	23%
DESKTOP	136	175	226	292	400	540	691	909	32%
SYSTEMS INTEGRATION	339	484	585	708	856	1037	1253	1516	21%
SOFTWARE DEVELOPMENT	183	260	314	380	460	557	673	814	21%
DESIGN/INTEGRATION	52	75	90	109	132	160	193	233	21%
PROJECT MGMT/CONSULTING	76	109	132	160	193	234	283	342	21%
EDUCATION/TRAINING	17	24	30	36	43	52	63	76	21%
OPERATIONS/MAINTENANCE	11	16	19	23	28	34	41	49	21%
TOTAL	4613	5353	6106	7142	8391	9865	11568	13591	17%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	CAGR 92-97
MISCELLANEOUS INDUSTRIES									
PROFESSIONAL SERVICES	116	132	145	152	165	177	191	206	8%
CONSULTING	28	31	35	38	43	47	52	58	11%
SOFTWARE DEVELOPMENT	71	82	90	92	98	104	111	118	6%
EDUCATION/TRAINING	17	19	20	22	24	26	28	30	8%
SYSTEMS OPERATIONS	17	20	23	26	30	35	40	46	15%
PLATFORM	7	8	9	10	11	12	13	14	10%
APPLICATIONS	10	12	14	16	19	23	27	32	18%
NETWORK									
DESKTOP									
SYSTEMS INTEGRATION	3	3	4	4	6	7	8	10	22%
SOFTWARE DEVELOPMENT	1.5	1.5	2	2	3	4	5	6	27%
DESIGN/INTEGRATION	0.6	0.6	1	1	1	1	1	1	11%
PROJECT MGMT/CONSULTING	0.9	0.9	1	1	2	2	2	2	17%
EDUCATION/TRAINING	*	*	*	*	*	*	*	*	*
OPERATIONS/MAINTENANCE	*	*	*	*	*	*	*	*	*
TOTAL	136	155	172	182	201	219	239	262	9%
GRAND TOTAL									
PROFESSIONAL SERVICES	17757	19505	21438	23537	25861	28442	31206	34314	10%
CONSULTING	4234	4706	5337	6007	6768	7627	8598	9699	13%
SOFTWARE DEVELOPMENT	10872	11929	12805	13937	15163	16462	17795	19277	8%
EDUCATION/TRAINING	2651	2870	3296	3593	3930	4353	4813	5337	11%
SYSTEMS OPERATIONS	10053	11705	13651	15993	18924	22435	26539	31470	18%
PLATFORM	3444	3892	4390	4945	5488	6213	7009	7884	12%
APPLICATIONS	4505	5203	6039	7034	8338	9772	11518	13502	17%
NETWORK	1191	1438	1709	2045	2456	2945	3545	4246	20%
DESKTOP	913	1172	1513	1969	2642	3505	4467	5838	31%
SYSTEMS INTEGRATION	3723	4442	5139	5995	6976	8223	9678	11309	17%
SOFTWARE DEVELOPMENT	1971	2379	2749	3206	3735	4395	5170	6038	17%
DESIGN/INTEGRATION	646	743	861	1007	1175	1391	1643	1926	17%
PROJECT MGMT/CONSULTING	791	912	1056	1229	1426	1677	1972	2301	17%
EDUCATION/TRAINING	155	224	259	301	348	411	482	562	17%
OPERATIONS/MAINTENANCE	161	185	214	252	292	349	411	482	17%
TOTAL	31533	35652	40228	45525	51761	59100	67423	82930	14%

Table B
IBM Forecast with Inflation

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
MANUFACTURING									
PROFESSIONAL SERVICES	1882	2053	2237	2433	2642	2871	3122	3409	9%
CONSULTING	449	512	582	661	750	851	966	1097	14%
SOFTWARE DEVELOPMENT	1154	1225	1298	1374	1451	1535	1625	1721	6%
EDUCATION/TRAINING	279	316	356	398	441	485	532	591	11%
SYSTEMS OPERATIONS	276	329	393	468	563	678	818	993	20%
PLATFORM	97	108	121	136	151	168	187	209	12%
APPLICATIONS	122	148	177	210	255	308	374	451	20%
NETWORK	33	40	49	60	73	90	110	135	23%
DESKTOP	25	34	46	62	83	112	148	199	34%
SYSTEMS INTEGRATION	263	311	372	446	534	656	790	953	20%
SOFTWARE DEVELOPMENT	142	167	201	240	288	353	425	513	20%
DESIGN/INTEGRATION	49	58	69	83	99	122	147	177	21%
PROJECT MGMT/CONSULTING	48	57	68	82	97	120	144	174	21%
EDUCATION/TRAINING	12	14	17	20	24	29	35	43	21%
OPERATIONS/MAINTENANCE	13	15	18	22	26	32	38	45	20%
TOTAL	2421	2693	3002	3348	3739	4205	4730	5355	12%
AUTOMOTIVE									
PROFESSIONAL SERVICES	321	350	382	415	451	490	533	582	9%
CONSULTING	77	87	99	113	128	145	165	187	14%
SOFTWARE DEVELOPMENT	197	209	222	235	248	262	277	294	6%
EDUCATION/TRAINING	47	54	61	68	75	83	91	101	11%
SYSTEMS OPERATIONS	49	58	69	83	99	119	144	174	20%
PLATFORM	17	19	21	24	26	30	33	37	12%
APPLICATIONS	22	26	31	37	45	54	66	79	20%
NETWORK	6	7	9	11	13	16	19	23	22%
DESKTOP	4	6	8	11	15	20	26	35	34%
SYSTEMS INTEGRATION	44	52	63	75	89	110	132	159	20%
SOFTWARE DEVELOPMENT	24	28	34	40	48	59	71	86	20%
DESIGN/INTEGRATION	8	10	12	14	17	20	25	30	20%
PROJECT MGMT/CONSULTING	8	10	11	14	16	20	24	29	20%
EDUCATION/TRAINING	2	2	3	3	4	5	6	7	20%
OPERATIONS/MAINTENANCE	2	3	3	4	4	5	6	8	20%
TOTAL	414	460	514	573	639	719	809	915	12%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
AEROSPACE									
PROFESSIONAL SERVICES	446	486	530	577	626	680	740	808	9%
CONSULTING	107	121	138	157	178	202	229	260	14%
SOFTWARE DEVELOPMENT	273	290	308	326	344	364	385	408	6%
EDUCATION/TRAINING	66	75	84	94	104	115	126	140	11%
SYSTEMS OPERATIONS	66	78	93	111	133	161	194	235	20%
PLATFORM	23	26	29	32	36	40	44	50	12%
APPLICATIONS	29	35	42	50	60	73	89	107	20%
NETWORK	8	9	12	14	17	21	26	32	23%
DESKTOP	6	8	11	15	20	26	35	47	34%
SYSTEMS INTEGRATION	62	74	88	106	126	155	187	226	20%
SOFTWARE DEVELOPMENT	34	40	48	57	68	84	101	122	20%
DESIGN/INTEGRATION	12	14	16	20	23	29	35	42	21%
PROJECT MGMT/CONSULTING	11	13	16	19	23	28	34	41	21%
EDUCATION/TRAINING	3	3	4	5	6	7	8	10	21%
OPERATIONS/MAINTENANCE	3	4	4	5	6	7	9	11	20%
TOTAL	574	638	711	793	886	996	1121	1269	12%
ELECTRICAL MACHINERY									
PROFESSIONAL SERVICES	870	949	1034	1124	1221	1327	1443	1575	9%
CONSULTING	208	237	269	306	347	393	446	507	14%
SOFTWARE DEVELOPMENT	533	566	600	635	671	709	751	795	6%
EDUCATION/TRAINING	129	146	165	184	204	224	246	273	11%
SYSTEMS OPERATIONS	128	152	181	216	260	313	378	459	20%
PLATFORM	45	50	56	63	70	78	86	97	12%
APPLICATIONS	56	68	82	97	118	142	173	208	20%
NETWORK	15	18	23	28	34	41	51	62	23%
DESKTOP	12	16	21	28	39	52	68	92	34%
SYSTEMS INTEGRATION	122	144	172	206	247	303	365	440	20%
SOFTWARE DEVELOPMENT	66	77	93	111	133	163	197	237	20%
DESIGN/INTEGRATION	23	27	32	38	46	56	68	82	21%
PROJECT MGMT/CONSULTING	22	26	31	38	45	55	67	80	21%
EDUCATION/TRAINING	5	6	8	9	11	14	16	20	21%
OPERATIONS/MAINTENANCE	6	7	8	10	12	15	17	21	20%
TOTAL	1119	1244	1387	1547	1728	1943	2186	2474	12%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
CONSTRUCTION									
PROFESSIONAL SERVICES	110	124	136	142	152	162	174	186	7%
CONSULTING	27	29	33	35	40	43	47	52	10%
SOFTWARE DEVELOPMENT	67	77	84	86	90	95	101	107	6%
EDUCATION/TRAINING	16	18	19	20	22	24	25	27	7%
SYSTEMS OPERATIONS	17	20	23	26	30	35	40	46	15%
PLATFORM	7	8	9	10	11	12	12	14	10%
APPLICATIONS	10	12	14	16	19	22	26	31	17%
NETWORK	0	0	0	0	0	0	1	1	20%
DESKTOP	0	0	0	0	0	1	1	1	31%
SYSTEMS INTEGRATION	4	4	5	5	7	8	10	12	21%
SOFTWARE DEVELOPMENT	2	2	2	2	3	4	6	7	26%
DESIGN/INTEGRATION	1	1	1	1	1	1	1	2	14%
PROJECT MGMT/CONSULTING	1	1	1	1	2	2	2	3	18%
EDUCATION/TRAINING	0	0	0	0	0	0	0	0	22%
OPERATIONS/MAINTENANCE	0	0	0	0	0	0	0	0	22%
TOTAL	131	148	164	173	190	205	223	244	9%
PROCESS									
PROFESSIONAL SERVICES	846	956	1049	1141	1240	1348	1467	1605	9%
CONSULTING	204	232	263	298	338	384	435	494	13%
SOFTWARE DEVELOPMENT	523	590	634	673	711	751	793	842	6%
EDUCATION/TRAINING	120	135	152	170	191	213	239	269	12%
SYSTEMS OPERATIONS	300	351	414	486	551	672	792	942	18%
PLATFORM	96	106	120	135	130	167	184	205	12%
APPLICATIONS	141	166	196	229	269	315	369	433	17%
NETWORK	36	43	49	57	65	75	89	103	16%
DESKTOP	27	36	48	65	88	116	151	201	33%
SYSTEMS INTEGRATION	34	69	77	87	99	114	130	147	13%
SOFTWARE DEVELOPMENT	19	38	42	48	55	62	72	81	14%
DESIGN/INTEGRATION	5	10	12	13	15	17	20	22	14%
PROJECT MGMT/CONSULTING	6	12	14	15	17	20	23	26	13%
EDUCATION/TRAINING	2	4	5	5	6	7	8	9	12%
OPERATIONS/MAINTENANCE	2	4	5	5	6	7	8	9	12%
TOTAL	1180	1377	1540	1714	1890	2134	2389	2695	12%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
CONSUMER GOODS									
PROFESSIONAL SERVICES	247	280	307	334	363	394	429	469	9%
CONSULTING	60	68	77	87	99	112	127	144	13%
SOFTWARE DEVELOPMENT	153	173	186	197	208	220	232	247	6%
EDUCATION/TRAINING	35	39	44	50	56	62	70	78	12%
SYSTEMS OPERATIONS	88	103	121	143	162	197	232	276	18%
PLATFORM	28	31	35	40	38	49	54	60	12%
APPLICATIONS	42	49	58	67	79	92	108	127	17%
NETWORK	10	12	14	17	19	22	26	30	16%
DESKTOP	8	10	14	19	26	34	44	58	33%
SYSTEMS INTEGRATION	9	19	22	24	27	32	36	40	13%
SOFTWARE DEVELOPMENT	5	11	12	13	15	17	20	22	13%
DESIGN/INTEGRATION	1	3	3	4	4	5	5	6	13%
PROJECT MGMT/CONSULTING	2	3	4	4	5	6	6	7	13%
EDUCATION/TRAINING	1	1	1	1	2	2	2	2	12%
OPERATIONS/MAINTENANCE	1	1	1	1	2	2	2	2	12%
TOTAL	345	402	450	501	552	623	697	785	12%
CHEMICALS/PHARM.									
PROFESSIONAL SERVICES	233	264	289	315	342	372	405	443	9%
CONSULTING	56	64	73	82	93	106	120	136	13%
SOFTWARE DEVELOPMENT	144	163	175	186	196	207	219	233	6%
EDUCATION/TRAINING	33	37	42	47	52	59	66	74	12%
SYSTEMS OPERATIONS	84	98	116	136	155	188	222	264	18%
PLATFORM	27	30	34	38	36	47	52	58	12%
APPLICATIONS	40	47	55	64	75	88	103	121	17%
NETWORK	10	12	14	16	18	21	25	29	16%
DESKTOP	8	10	14	18	25	33	42	56	33%
SYSTEMS INTEGRATION	9	19	21	23	26	30	34	39	13%
SOFTWARE DEVELOPMENT	5	10	11	13	15	16	19	21	13%
DESIGN/INTEGRATION	1	3	3	3	4	4	5	6	13%
PROJECT MGMT/CONSULTING	2	3	4	4	5	5	6	7	13%
EDUCATION/TRAINING	1	1	1	1	2	2	2	2	12%
OPERATIONS/MAINTENANCE	1	1	1	1	2	2	2	2	12%
TOTAL	326	381	426	474	523	591	661	746	12%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
PETROLEUM									
PROFESSIONAL SERVICES	426	480	525	570	618	670	727	794	9%
CONSULTING	106	120	135	152	171	193	218	246	13%
SOFTWARE DEVELOPMENT	257	289	310	329	347	367	388	411	6%
EDUCATION/TRAINING	63	71	80	89	99	110	122	137	11%
SYSTEMS OPERATIONS	157	183	216	254	289	351	414	493	18%
PLATFORM	54	60	68	77	76	95	106	118	12%
APPLICATIONS	70	82	97	113	133	156	183	215	17%
NETWORK	19	22	26	30	35	40	48	56	16%
DESKTOP	14	19	25	33	46	60	78	103	33%
SYSTEMS INTEGRATION	60	80	90	101	114	130	147	166	13%
SOFTWARE DEVELOPMENT	33	44	50	56	63	71	81	92	13%
DESIGN/INTEGRATION	9	12	14	15	17	20	22	25	13%
PROJECT MGMT/CONSULTING	12	15	18	20	22	25	28	32	13%
EDUCATION/TRAINING	3	5	5	6	6	8	8	9	12%
OPERATIONS/MAINTENANCE	3	4	4	5	5	6	7	8	13%
TOTAL	643	743	831	925	1021	1151	1289	1453	12%
RUBBER/GLASS/MINERALS									
PROFESSIONAL SERVICES	403	456	500	544	591	643	700	765	9%
CONSULTING	97	110	125	142	161	183	207	235	13%
SOFTWARE DEVELOPMENT	249	281	303	321	339	358	378	402	6%
EDUCATION/TRAINING	57	64	72	81	91	102	114	128	12%
SYSTEMS OPERATIONS	146	170	200	235	267	325	384	456	18%
PLATFORM	46	51	58	65	63	81	89	99	12%
APPLICATIONS	69	81	95	111	130	152	179	209	17%
NETWORK	17	21	24	28	31	36	43	50	16%
DESKTOP	13	17	23	31	43	56	73	97	33%
SYSTEMS INTEGRATION	15	32	36	40	45	52	59	67	13%
SOFTWARE DEVELOPMENT	8	18	20	22	25	28	33	37	13%
DESIGN/INTEGRATION	2	5	5	6	7	8	9	10	13%
PROJECT MGMT/CONSULTING	3	6	6	7	8	9	10	12	13%
EDUCATION/TRAINING	1	2	2	2	3	3	4	4	12%
OPERATIONS/MAINTENANCE	1	2	2	2	3	3	4	4	12%
TOTAL	563	658	736	819	903	1020	1142	1288	12%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
COMMUNICATIONS									
PROFESSIONAL SERVICES	878	965	1109	1273	1458	1671	1916	2200	15%
CONSULTING	212	244	275	315	361	413	484	556	15%
SOFTWARE DEVELOPMENT	548	598	684	782	900	1037	1188	1364	15%
EDUCATION/TRAINING	118	123	150	175	198	221	244	280	15%
SYSTEMS OPERATIONS	126	145	167	185	223	259	301	353	16%
PLATFORM	49	54	61	61	77	85	93	103	11%
APPLICATIONS	50	58	67	76	87	99	117	135	15%
NETWORK	15	18	21	23	26	30	35	41	14%
DESKTOP	11	14	18	24	33	44	56	74	31%
SYSTEMS INTEGRATION	100	116	140	167	200	241	291	350	20%
SOFTWARE DEVELOPMENT	56	65	78	93	112	134	162	195	20%
DESIGN/INTEGRATION	16	18	22	27	32	39	47	57	21%
PROJECT MGMT/CONSULTING	19	22	27	32	39	47	56	68	20%
EDUCATION/TRAINING	4	5	6	7	8	10	12	14	19%
OPERATIONS/MAINTENANCE	5	6	7	8	9	12	14	17	20%
TOTAL	1104	1226	1416	1625	1882	2171	2508	2902	15%
COMPUTER SERVICES									
PROFESSIONAL SERVICES	45	48	52	55	59	63	67	72	7%
CONSULTING	11	12	14	15	17	18	20	22	10%
SOFTWARE DEVELOPMENT	28	29	31	32	34	36	37	39	5%
EDUCATION/TRAINING	7	7	7	8	9	9	10	11	8%
SYSTEMS OPERATIONS	27	33	39	46	55	65	77	92	19%
PLATFORM	8	9	10	11	12	14	15	17	12%
APPLICATIONS	14	17	20	24	29	33	39	47	19%
NETWORK	3	4	5	5	6	8	9	11	18%
DESKTOP	3	3	4	6	8	10	13	17	31%
SYSTEMS INTEGRATION	14	14	17	22	25	31	38	46	22%
SOFTWARE DEVELOPMENT	7	7	8	10	12	14	18	21	22%
DESIGN/INTEGRATION	3	3	4	5	5	6	8	10	22%
PROJECT MGMT/CONSULTING	3	3	4	5	5	6	8	10	22%
EDUCATION/TRAINING	0	1	1	1	1	2	2	2	22%
OPERATIONS/MAINTENANCE	1	1	1	1	1	2	2	3	22%
TOTAL	86	95	108	123	139	159	182	210	14%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
CONSULTANT									
PROFESSIONAL SERVICES	30	32	34	36	39	41	44	47	7%
CONSULTING	7	8	9	10	11	12	13	14	10%
SOFTWARE DEVELOPMENT	18	19	20	21	22	23	24	26	5%
EDUCATION/TRAINING	4	4	5	5	6	6	7	7	8%
SYSTEMS OPERATIONS	15	18	21	25	31	36	43	52	19%
PLATFORM	4	5	6	6	7	8	9	10	12%
APPLICATIONS	7	9	11	13	16	18	21	25	20%
NETWORK	2	2	3	3	4	4	5	6	20%
DESKTOP	1	2	2	3	4	6	7	10	31%
SYSTEMS INTEGRATION	9	9	10	14	16	19	24	29	22%
SOFTWARE DEVELOPMENT	4	4	5	6	7	9	11	13	22%
DESIGN/INTEGRATION	2	2	2	3	3	4	5	6	22%
PROJECT MGMT/CONSULTING	2	2	2	3	3	4	5	6	22%
EDUCATION/TRAINING	0	0	1	1	1	1	1	2	22%
OPERATIONS/MAINTENANCE	0	0	1	1	1	1	1	2	22%
TOTAL	53	58	66	75	85	97	110	127	14%
HEALTH									
PROFESSIONAL SERVICES	672	739	809	908	1014	1130	1252	1395	11%
CONSULTING	162	182	211	241	272	308	349	399	14%
SOFTWARE DEVELOPMENT	413	453	484	544	605	662	718	789	10%
EDUCATION/TRAINING	97	105	114	124	138	159	185	208	12%
SYSTEMS OPERATIONS	1187	1389	1605	1856	2157	2544	3028	3578	17%
PLATFORM	447	508	567	625	689	758	843	934	11%
APPLICATIONS	491	568	653	753	861	1017	1225	1430	17%
NETWORK	141	171	199	232	271	320	388	458	18%
DESKTOP	108	142	187	247	336	449	571	755	32%
SYSTEMS INTEGRATION	178	212	244	276	314	360	412	474	14%
SOFTWARE DEVELOPMENT	96	116	133	151	171	196	224	257	14%
DESIGN/INTEGRATION	29	33	39	43	49	57	65	75	14%
PROJECT MGMT/CONSULTING	35	41	48	54	61	71	82	95	15%
EDUCATION/TRAINING	10	12	13	15	17	19	22	25	13%
OPERATIONS/MAINTENANCE	9	10	12	13	15	17	19	21	12%
TOTAL	2038	2341	2658	3041	3485	4034	4692	5447	15%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
HIGHER EDUCATION									
PROFESSIONAL SERVICES	438	485	532	604	684	773	864	972	12%
CONSULTING	106	118	138	159	181	208	238	275	15%
SOFTWARE DEVELOPMENT	269	297	318	364	412	458	498	553	11%
EDUCATION/TRAINING	63	70	75	82	90	108	128	145	13%
SYSTEMS OPERATIONS	374	435	501	580	678	796	953	1124	17%
PLATFORM	85	96	106	117	129	142	157	174	10%
APPLICATIONS	210	242	277	320	368	424	510	592	16%
NETWORK	44	54	62	72	85	101	122	145	18%
DESKTOP	34	43	56	71	96	129	164	214	31%
SYSTEMS INTEGRATION	88	114	135	160	189	229	270	322	19%
SOFTWARE DEVELOPMENT	48	62	73	86	103	124	146	174	19%
DESIGN/INTEGRATION	15	18	22	26	31	37	44	52	19%
PROJECT MGMT/CONSULTING	18	24	28	33	39	47	56	67	19%
EDUCATION/TRAINING	4	5	7	7	9	10	12	15	20%
OPERATIONS/MAINTENANCE	4	5	6	7	8	10	12	14	20%
TOTAL	900	1034	1167	1344	1551	1798	2087	2418	15%
MEDIA									
PROFESSIONAL SERVICES	770	841	929	1026	1131	1249	1381	1533	10%
CONSULTING	185	211	238	271	308	349	399	454	14%
SOFTWARE DEVELOPMENT	474	508	550	596	648	706	770	841	9%
EDUCATION/TRAINING	111	122	140	158	176	194	213	238	12%
SYSTEMS OPERATIONS	135	160	190	223	268	319	381	458	19%
PLATFORM	47	53	60	65	75	83	92	103	12%
APPLICATIONS	59	71	85	101	121	143	172	205	19%
NETWORK	16	19	23	28	33	40	49	59	20%
DESKTOP	12	16	22	29	39	52	68	91	33%
SYSTEMS INTEGRATION	112	128	154	187	222	272	329	397	21%
SOFTWARE DEVELOPMENT	60	68	82	99	118	144	174	211	21%
DESIGN/INTEGRATION	21	24	28	34	41	50	61	74	21%
PROJECT MGMT/CONSULTING	21	24	29	35	42	51	62	75	21%
EDUCATION/TRAINING	5	6	7	9	10	13	15	18	21%
OPERATIONS/MAINTENANCE	5	6	8	9	11	14	16	19	20%
TOTAL	1016	1129	1273	1435	1622	1841	2091	2388	13%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
SCHOOLS									
PROFESSIONAL SERVICES	287	318	350	398	452	512	573	645	12%
CONSULTING	69	77	91	104	119	137	157	181	15%
SOFTWARE DEVELOPMENT	176	195	209	241	273	304	331	368	11%
EDUCATION/TRAINING	42	46	49	53	59	71	85	97	13%
SYSTEMS OPERATIONS	195	227	263	306	358	421	505	598	17%
PLATFORM	46	52	57	64	70	77	85	94	11%
APPLICATIONS	109	125	143	165	190	219	264	307	16%
NETWORK	23	28	33	40	48	57	70	84	20%
DESKTOP	18	23	29	37	51	68	86	113	31%
SYSTEMS INTEGRATION	46	62	74	88	105	127	151	181	20%
SOFTWARE DEVELOPMENT	25	33	40	47	57	68	81	97	19%
DESIGN/INTEGRATION	7	10	12	14	17	20	24	29	20%
PROJECT MGMT/CONSULTING	10	13	16	19	23	28	33	39	20%
EDUCATION/TRAINING	2	3	4	4	5	6	7	9	20%
OPERATIONS/MAINTENANCE	2	2	3	3	4	5	6	7	20%
TOTAL	528	608	686	792	915	1060	1229	1424	15%
STATE/LOCAL GOV'T									
PROFESSIONAL SERVICES	1609	1789	1968	2251	2562	2912	3261	3683	13%
CONSULTING	387	434	513	588	674	772	887	1024	15%
SOFTWARE DEVELOPMENT	986	1098	1178	1364	1554	1736	1888	2106	11%
EDUCATION/TRAINING	236	257	278	299	334	404	486	553	14%
SYSTEMS OPERATIONS	915	1066	1237	1442	1694	1994	2398	2845	18%
PLATFORM	218	248	276	307	338	372	410	454	11%
APPLICATIONS	506	580	663	765	880	1013	1228	1428	16%
NETWORK	109	132	160	194	237	289	353	431	22%
DESKTOP	83	106	137	176	239	320	406	532	31%
SYSTEMS INTEGRATION	207	294	354	426	511	614	737	886	20%
SOFTWARE DEVELOPMENT	112	158	190	228	274	330	396	476	20%
DESIGN/INTEGRATION	32	46	54	66	79	95	113	136	20%
PROJECT MGMT/CONSULTING	46	66	80	96	115	139	166	200	20%
EDUCATION/TRAINING	10	15	18	22	26	31	37	45	20%
OPERATIONS/MAINTENANCE	7	10	12	14	17	20	24	29	20%
TOTAL	2731	3149	3559	4118	4767	5520	6395	7413	15%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
TRANSPORTATION									
PROFESSIONAL SERVICES	189	203	218	232	247	260	277	295	6%
CONSULTING	45	49	55	61	66	71	77	84	9%
SOFTWARE DEVELOPMENT	118	126	132	138	146	153	163	172	5%
EDUCATION/TRAINING	26	28	31	34	35	36	38	40	6%
SYSTEMS OPERATIONS	149	172	199	233	269	310	360	423	16%
PLATFORM	77	87	96	106	116	128	141	156	10%
APPLICATIONS	41	47	54	63	73	83	97	112	16%
NETWORK	18	21	26	32	38	44	53	65	21%
DESKTOP	14	18	23	32	42	55	69	91	31%
SYSTEMS INTEGRATION	72	83	99	120	142	175	208	250	20%
SOFTWARE DEVELOPMENT	39	46	54	66	79	96	115	138	20%
DESIGN/INTEGRATION	12	14	17	20	24	30	35	42	21%
PROJECT MGMT/CONSULTING	15	17	20	25	28	35	42	50	20%
EDUCATION/TRAINING	3	4	5	6	6	8	9	11	18%
OPERATIONS/MAINTENANCE	2	2	3	4	5	6	7	9	24%
TOTAL	409	458	515	585	659	745	845	969	13%
UTILITIES									
PROFESSIONAL SERVICES	212	229	246	264	282	301	319	341	7%
CONSULTING	70	76	81	88	95	103	110	119	8%
SOFTWARE DEVELOPMENT	93	99	105	111	118	124	132	141	6%
EDUCATION/TRAINING	49	55	60	65	69	74	76	82	7%
SYSTEMS OPERATIONS	42	47	54	60	70	81	93	109	15%
PLATFORM	23	25	27	29	33	36	40	45	10%
APPLICATIONS	10	12	14	15	18	20	23	27	14%
NETWORK	5	6	7	8	9	10	12	14	16%
DESKTOP	3	4	6	8	10	14	17	23	32%
SYSTEMS INTEGRATION	218	237	267	297	330	368	410	458	12%
SOFTWARE DEVELOPMENT	122	133	149	166	186	206	230	256	12%
DESIGN/INTEGRATION	31	34	38	43	47	53	59	66	12%
PROJECT MGMT/CONSULTING	45	48	55	60	67	75	84	93	12%
EDUCATION/TRAINING	12	14	15	17	18	21	23	26	11%
OPERATIONS/MAINTENANCE	8	8	9	11	12	13	15	17	12%
TOTAL	472	514	566	621	682	750	822	907	10%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
WHOLESALE DISTRIBUTION									
PROFESSIONAL SERVICES	479	515	551	588	627	667	710	759	7%
CONSULTING	114	126	140	153	168	182	198	216	9%
SOFTWARE DEVELOPMENT	299	318	335	352	370	389	411	433	5%
EDUCATION/TRAINING	65	71	77	83	90	96	102	110	8%
SYSTEMS OPERATIONS	264	315	367	429	503	591	699	829	17%
PLATFORM	125	143	162	182	202	227	258	291	13%
APPLICATIONS	83	100	117	136	160	184	217	254	17%
NETWORK	32	39	46	55	66	79	96	114	19%
DESKTOP	25	33	42	56	76	100	129	169	31%
SYSTEMS INTEGRATION	127	144	167	201	232	273	323	381	18%
SOFTWARE DEVELOPMENT	66	74	86	104	120	141	165	195	17%
DESIGN/INTEGRATION	25	28	33	39	45	53	62	74	17%
PROJECT MGMT/CONSULTING	25	27	33	40	46	53	63	75	19%
EDUCATION/TRAINING	5	7	8	10	11	13	16	19	17%
OPERATIONS/MAINTENANCE	5	7	8	10	11	13	16	19	17%
TOTAL	870	974	1086	1219	1362	1531	1733	1969	12%
RETAIL DISTRIBUTION									
PROFESSIONAL SERVICES	679	740	802	869	938	1013	1097	1190	8%
CONSULTING	163	184	207	233	261	294	330	372	12%
SOFTWARE DEVELOPMENT	419	446	473	501	528	557	589	623	6%
EDUCATION/TRAINING	98	110	122	135	148	162	178	196	10%
SYSTEMS OPERATIONS	342	411	501	611	736	892	1073	1310	21%
PLATFORM	139	163	193	227	257	294	336	389	16%
APPLICATIONS	132	158	194	237	290	355	430	526	22%
NETWORK	40	49	61	75	92	114	141	175	23%
DESKTOP	31	40	54	71	97	130	166	221	33%
SYSTEMS INTEGRATION	192	230	276	332	394	479	576	693	20%
SOFTWARE DEVELOPMENT	100	120	143	173	205	249	299	360	20%
DESIGN/INTEGRATION	37	45	54	65	76	93	111	134	20%
PROJECT MGMT/CONSULTING	36	44	53	63	74	90	109	131	20%
EDUCATION/TRAINING	9	11	13	16	19	23	28	34	21%
OPERATIONS/MAINTENANCE	9	11	13	16	20	24	28	34	21%
TOTAL	1213	1381	1579	1812	2067	2384	2746	3194	15%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
FINANCE									
PROFESSIONAL SERVICES	1827	1999	2157	2295	2446	2613	2792	2990	7%
CONSULTING	439	481	526	573	625	681	741	809	9%
SOFTWARE DEVELOPMENT	1137	1246	1337	1403	1476	1559	1649	1745	6%
EDUCATION/TRAINING	250	272	295	319	345	373	403	436	8%
SYSTEMS OPERATIONS	1744	2039	2394	2834	3386	4030	4804	5748	19%
PLATFORM	612	708	810	925	1055	1204	1387	1588	14%
APPLICATIONS	767	865	999	1161	1361	1579	1866	2179	17%
NETWORK	206	257	312	388	481	591	716	880	23%
DESKTOP	159	209	272	360	490	656	834	1101	32%
SYSTEMS INTEGRATION	176	224	258	308	361	440	559	672	20%
SOFTWARE DEVELOPMENT	87	111	127	152	179	218	277	333	20%
DESIGN/INTEGRATION	35	45	52	62	72	88	112	134	20%
PROJECT MGMT/CONSULTING	35	45	52	61	72	88	111	133	20%
EDUCATION/TRAINING	9	12	14	17	19	23	30	36	20%
OPERATIONS/MAINTENANCE	9	12	14	17	19	23	30	36	20%
TOTAL	3747	4262	4808	5436	6193	7083	8155	9410	14%
INSURANCE									
PROFESSIONAL SERVICES	1535	1590	1695	1814	1936	2067	2208	2362	7%
CONSULTING	364	387	421	458	498	541	589	642	9%
SOFTWARE DEVELOPMENT	961	982	1035	1098	1161	1227	1297	1372	6%
EDUCATION/TRAINING	210	222	240	258	277	299	323	348	8%
SYSTEMS OPERATIONS	1057	1222	1412	1640	1908	2232	2615	3076	16%
PLATFORM	416	457	500	556	602	657	737	812	10%
APPLICATIONS	420	489	571	662	769	900	1055	1232	17%
NETWORK	125	153	184	218	260	305	351	415	18%
DESKTOP	96	123	158	203	276	370	471	617	31%
SYSTEMS INTEGRATION	115	157	178	211	254	302	360	425	18%
SOFTWARE DEVELOPMENT	60	82	94	110	133	158	188	222	18%
DESIGN/INTEGRATION	21	31	34	41	48	58	69	81	17%
PROJECT MGMT/CONSULTING	21	26	30	37	43	51	61	73	19%
EDUCATION/TRAINING	6	9	10	12	15	18	21	25	19%
OPERATIONS/MAINTENANCE	6	9	10	12	15	18	20	24	18%
TOTAL	2707	2970	3284	3665	4098	4601	5183	5863	12%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
SECURITIES									
PROFESSIONAL SERVICES	378	413	446	475	506	541	578	619	7%
CONSULTING	91	99	109	118	129	141	153	167	9%
SOFTWARE DEVELOPMENT	235	258	277	290	306	323	341	361	6%
EDUCATION/TRAINING	52	56	61	66	71	77	83	90	8%
SYSTEMS OPERATIONS	363	424	498	589	704	838	999	1195	19%
PLATFORM	127	147	169	192	220	251	289	331	14%
APPLICATIONS	160	180	208	241	282	328	387	452	17%
NETWORK	43	53	65	81	100	123	149	183	23%
DESKTOP	33	43	57	75	102	136	173	229	32%
SYSTEMS INTEGRATION	36	46	52	62	73	89	114	136	20%
SOFTWARE DEVELOPMENT	18	23	26	31	36	44	56	68	20%
DESIGN/INTEGRATION	7	9	10	12	15	18	23	27	20%
PROJECT MGMT/CONSULTING	7	9	10	12	15	18	23	27	20%
EDUCATION/TRAINING	2	2	3	3	4	5	6	7	20%
OPERATIONS/MAINTENANCE	2	2	3	3	4	5	6	7	20%
TOTAL	776	883	996	1126	1283	1468	1690	1950	14%
FEDERAL GOVERNMENT									
PROFESSIONAL SERVICES	1947	2142	2385	2515	2663	2830	2998	3211	7%
CONSULTING	420	424	474	499	530	562	584	623	7%
SOFTWARE DEVELOPMENT	1149	1359	1418	1539	1670	1813	1968	2121	8%
EDUCATION/TRAINING	377	359	493	477	463	455	447	467	4%
SYSTEMS OPERATIONS	1807	2026	2272	2544	2958	3323	3632	4090	12%
PLATFORM	582	639	706	779	849	928	1015	1114	10%
APPLICATIONS	846	954	1072	1204	1469	1662	1781	2020	13%
NETWORK	214	241	270	302	338	380	428	480	12%
DESKTOP	164	192	224	260	301	353	408	476	16%
SYSTEMS INTEGRATION	1413	1554	1728	1923	2138	2371	2638	2936	11%
SOFTWARE DEVELOPMENT	735	835	928	1033	1149	1275	1417	1578	11%
DESIGN/INTEGRATION	240	240	267	297	331	366	408	454	11%
PROJECT MGMT/CONSULTING	339	350	389	433	481	534	594	660	11%
EDUCATION/TRAINING	43	79	88	97	107	119	132	147	11%
OPERATIONS/MAINTENANCE	57	50	56	63	70	77	87	97	11%
TOTAL	5166	5722	6385	6983	7759	8524	9268	10237	10%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
GRAND TOTAL									
PROFESSIONAL SERVICES	17757	19448	21272	23197	25291	27600	30078	32950	9%
CONSULTING	4234	4692	5296	5920	6619	7401	8287	9312	12%
SOFTWARE DEVELOPMENT	10872	11894	12706	13736	14829	15975	17151	18512	8%
EDUCATION/TRAINING	2651	2862	3270	3541	3843	4224	4639	5126	10%
SYSTEMS OPERATIONS	10053	11671	13545	15762	18507	21771	25579	30218	17%
PLATFORM	3444	3881	4356	4874	5367	6029	6756	7562	12%
APPLICATIONS	4505	5188	5992	6932	8154	9483	11101	12951	16%
NETWORK	1191	1434	1696	2015	2402	2858	3417	4083	19%
DESKTOP	913	1169	1501	1941	2584	3401	4305	5622	30%
SYSTEMS INTEGRATION	3723	4429	5099	5908	6822	7980	9328	10885	16%
SOFTWARE DEVELOPMENT	1971	2372	2728	3160	3653	4265	4983	5812	16%
DESIGN/INTEGRATION	646	740	854	992	1149	1350	1584	1853	16%
PROJECT MGMT/CONSULTING	791	909	1048	1211	1395	1627	1901	2215	16%
EDUCATION/TRAINING	155	223	257	297	340	399	465	541	16%
OPERATIONS/MAINTENANCE	161	184	212	248	286	339	396	464	17%
TOTAL	31533	35548	39916	44867	50619	57350	64985	74053	13%

Table C
IBM Forecast by Sector

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
INDUSTRIAL									
PROFESSIONAL SERVICES	5783	6398	6989	7594	8246	8957	9739	10635	9%
CONSULTING	1389	1580	1795	2034	2305	2611	2959	3358	13%
SOFTWARE DEVELOPMENT	3550	3863	4120	4359	4606	4868	5149	5459	6%
EDUCATION/TRAINING	844	955	1074	1201	1334	1477	1632	1819	11%
SYSTEMS OPERATIONS	1311	1543	1827	2158	2510	3040	3619	4339	19%
PLATFORM	439	488	552	619	637	766	847	947	12%
APPLICATIONS	599	714	845	996	1182	1404	1669	1981	19%
NETWORK	154	184	220	260	306	362	437	521	19%
DESKTOP	118	156	210	283	384	509	665	890	34%
SYSTEMS INTEGRATION	622	804	946	1114	1315	1589	1889	2249	19%
SOFTWARE DEVELOPMENT	336	435	512	603	713	859	1024	1219	19%
DESIGN/INTEGRATION	111	141	167	197	234	283	337	402	19%
PROJECT MGMT/CONSULTING	114	147	173	204	240	291	345	410	19%
EDUCATION/TRAINING	30	40	46	54	63	77	90	107	18%
OPERATIONS/MAINTENANCE	30	41	48	56	65	80	94	111	18%
TOTAL	7716	8744	9762	10866	12071	13586	15247	17223	12%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
ACADEMIC, GENERAL & PUBLIC									
PROFESSIONAL SERVICES	5130	5650	6246	7047	7928	8913	9954	11183	12%
CONSULTING	1254	1412	1625	1852	2103	2391	2734	3126	14%
SOFTWARE DEVELOPMENT	3123	3422	3712	4193	4711	5239	5749	6398	11%
EDUCATION/TRAINING	753	816	909	1002	1114	1283	1472	1660	13%
SYSTEMS OPERATIONS	3165	3692	4275	4957	5803	6825	8140	9631	17%
PLATFORM	1003	1136	1265	1393	1545	1704	1887	2091	11%
APPLICATIONS	1498	1728	1987	2294	2641	3070	3695	4307	16%
NETWORK	376	456	538	637	758	904	1099	1314	19%
DESKTOP	287	372	484	632	858	1147	1458	1919	31%
SYSTEMS INTEGRATION	1043	1270	1494	1757	2055	2436	2869	3393	18%
SOFTWARE DEVELOPMENT	568	692	811	953	1118	1321	1556	1838	18%
DESIGN/INTEGRATION	168	202	238	280	329	391	462	548	18%
PROJECT MGMT/CONSULTING	214	261	308	362	424	503	595	705	18%
EDUCATION/TRAINING	51	64	76	89	102	121	141	166	17%
OPERATIONS/MAINTENANCE	42	51	61	72	82	100	116	137	18%
TOTAL	9338	10612	12015	13760	15787	18174	20963	24207	15%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
SERVICES									
PROFESSIONAL SERVICES	4897	5258	5652	6041	6453	6900	7385	7920	7%
CONSULTING	1171	1277	1401	1536	1681	1838	2011	2205	10%
SOFTWARE DEVELOPMENT	3050	3250	3456	3644	3841	4054	4286	4534	6%
EDUCATION/TRAINING	676	731	794	861	932	1008	1089	1180	8%
SYSTEMS OPERATIONS	3771	4410	5171	6103	7236	8583	10190	12158	18%
PLATFORM	1419	1618	1833	2083	2335	2632	3007	3410	13%
APPLICATIONS	1562	1792	2088	2438	2862	3346	3956	4643	17%
NETWORK	446	552	668	817	999	1212	1454	1768	21%
DESKTOP	344	449	583	765	1040	1392	1773	2337	32%
SYSTEMS INTEGRATION	645	801	931	1115	1314	1583	1932	2307	19%
SOFTWARE DEVELOPMENT	331	409	476	569	672	810	986	1177	19%
DESIGN/INTEGRATION	126	158	182	218	256	309	377	450	19%
PROJECT MGMT/CONSULTING	124	151	177	212	249	300	367	439	19%
EDUCATION/TRAINING	32	41	47	57	68	82	101	121	20%
OPERATIONS/MAINTENANCE	32	42	47	58	68	82	100	120	19%
TOTAL	9314	10469	11754	13258	15003	17066	19507	22385	13%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
FEDERAL GOVERNMENT									
PROFESSIONAL SERVICES	1947	2142	2385	2515	2663	2830	2998	3211	7%
CONSULTING	420	424	474	499	530	562	584	623	7%
SOFTWARE DEVELOPMENT	1149	1359	1418	1539	1670	1813	1968	2121	8%
EDUCATION/TRAINING	377	359	493	477	463	455	447	467	4%
SYSTEMS OPERATIONS	1807	2026	2272	2544	2958	3323	3632	4090	12%
PLATFORM	582	639	706	779	849	928	1015	1114	10%
APPLICATIONS	846	954	1072	1204	1469	1662	1781	2020	13%
NETWORK	214	241	270	302	338	380	428	480	12%
DESKTOP	164	192	224	260	301	353	408	476	16%
SYSTEMS INTEGRATION	1413	1554	1728	1923	2138	2371	2638	2936	11%
SOFTWARE DEVELOPMENT	735	835	928	1033	1149	1275	1417	1578	11%
DESIGN/INTEGRATION	240	240	267	297	331	366	408	454	11%
PROJECT MGMT/CONSULTING	339	350	389	433	481	534	594	660	11%
EDUCATION/TRAINING	43	79	88	97	107	119	132	147	11%
OPERATIONS/MAINTENANCE	57	50	56	63	70	77	87	97	11%
TOTAL	5166	5722	6385	6983	7759	8524	9268	10237	10%

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
GRAND TOTAL									
PROFESSIONAL SERVICES	17757	19448	21272	23197	25291	27600	30078	32950	9%
CONSULTING	4234	4692	5296	5920	6619	7401	8287	9312	12%
SOFTWARE DEVELOPMENT	10872	11894	12706	13736	14829	15975	17151	18512	8%
EDUCATION/TRAINING	2651	2862	3270	3541	3843	4224	4639	5126	10%
SYSTEMS OPERATIONS	10053	11671	13545	15762	18507	21771	25579	30218	17%
PLATFORM	3444	3881	4356	4874	5367	6029	6756	7562	12%
APPLICATIONS	4505	5188	5992	6932	8154	9483	11101	12951	16%
NETWORK	1191	1434	1696	2015	2402	2858	3417	4083	19%
DESKTOP	913	1169	1501	1941	2584	3401	4305	5622	30%
SYSTEMS INTEGRATION	3723	4429	5099	5908	6822	7980	9328	10885	16%
SOFTWARE DEVELOPMENT	1971	2372	2728	3160	3653	4265	4983	5812	16%
DESIGN/INTEGRATION	646	740	854	992	1149	1350	1584	1853	16%
PROJECT MGMT/CONSULTING	791	909	1048	1211	1395	1627	1901	2215	16%
EDUCATION/TRAINING	155	223	257	297	340	399	465	541	16%
OPERATIONS/MAINTENANCE	161	184	212	248	286	339	396	464	17%
TOTAL	31533	35548	39916	44867	50619	57350	64985	74053	13%

IS Revenues by IBM Industry

	Manuf. M5	Auto M2	Aero MA	Elect. M3	Constr. M1	Process P1/2/3/4	Consumer P6	Chem./ Pharm. P8/5	Petro P7	R/G/M P3	Comm. A	Comp. Servs. B	Consult. C	Health H	Higher Ed. E
INTERMETRICS	5420	4420	7855	1090	290	400	995	945	1735	1700	660	1160	100	1365	240
INTERSOLV	5400	910	1275	2490	330	1885	525	490	1205	845	215	355	250	445	420
KEANE INC.	8800	10730		6825		6830	1950	4880		1930	8900		960	20370	
KNOWLEDGEWARE	9413	1655	2100	4375	655	2150	520	445	1795	870	2885	1350	720	11515	5625
LEGENT	24310	4165	5760	11335	2090	3565	1025	885	3380	1525	5610	2670	1420	26850	17185
LOCKHEED	16835	3080	4230	8150	410	2775	475	435	1310	755	1220	680	360	17870	15200
LOGICON	2500			3680											
LOTUS	37440	6255	8885	17360	7150	5060	1660	1240	4950	2145	9405	3895	2285	45115	17240
MARTIN MARIETTA	7115	1020	8940	3795		595	155	150	550	255		50		9320	3765
MENTOR GRAPHICS CORP.	72560	12035	17185	33535		860									
MICROSOFT	122105	20380	28930	56420	11105	14580	4335	3640	14785	6275	25830	11690	6395	136270	70720
NATIONAL DATA									2285		6590			23675	1515
NATIONAL EDUCATION CORP.	2045	805	705	3050	200	18120	2715	2510	3020	1310	8050	100	405	10065	505
NOVELL	70250	11740	16635	32435	7195	10450	3135	2670	9910	4610	16780	7525	4165	90155	44290
NYNEX	39500	6670	9340	18065	11080	13040	6420	5625	7560	5995	45700	880	2460	18090	20910
ON-LINE SOFTWARE INT./CAI															
ORACLE	34945	5830	8280	16135	2470	4105	1185	2045	4105	1775	11785	3860	2240	39875	19475
PANSOPHIC/CAI															
POLICY MANAGEMENT SYS															
SHARED MEDICAL														425000	
SHL SYSTEMHOUSE	1460	220	270	520	60	8040	980	935	2010	1650	16280	905	580	5620	5040
SOFTWARE PUB.	8595	1435	2030	3975	650	1045	305	260	1090	450	2080	960	505	9150	6265
STERLING SOFTWARE	11780	1950	2765	5395	1920	1375	445	335	1485	1365	2515	1780	990	11135	9500
SUNGUARD	8600	1405	2190	3965	5	525	125	120	220	205	870	45	30	5	5
SYBASE INC	16985	2785	4025	7850	2230	5765	1735	1560	3110	2695	12025	1225	785	5645	3840
SYMANTEC CORP	10975	1860	2600	5070	1980	4920	1495	1345	2880	2320	6970	1325	855	12010	4490
SYSTEM CENTER	4995	835	1120	2310	555	900	280	240	825	420	1210	525	300	6290	3815
SYSTEM SOFTWARE ASSOC.INC.	29425	7845	8470	15190		6145	1720	1660	3110	2870					
SYSTEMATICS(not incl. CP)															
VALID LOGIC SYSTEMS INC.															
GRAND TOTAL	1331822	259182	359258	694280	106058	509483	145375	144050	318696	188385	543421	119455	76160	1846940	616408

Appendix D

	Manuf. M5	Auto M2	Aero MA	Elect. M3	Constr. M1	Process P1/2/3/4	Consumer P6	Chem./ Pharm. P8/5	Petro P7	R/G/M P3	Comm. A	Comp. Servs. B	Consult. C	Health H	Higher Ed. E
ADOBE	19780	3400	4583	9360	1030	1505	410	345	1455	600	3015	1280	655	12870	8075
ADP	105601	16400	23030	47800	3037	22000	6810	6535	16933	10215	12685	24300	16430	65850	12458
AGS - SEE NYNEX															
ALDUS	6390	1090	1500	2945	1191	2990	920	840	1790	1420	4010	905	605	5670	2370
AMERICAN MANAGEMENT SYS	8340	1450	3060	3825	350	8420	2490	2390	4320	4100	24281	1135	470	10230	31350
AMERICAN SOFTWARE	15905	2755	3790	7355		11220	3255	3150	6575	5420				7140	
ANALYSTS INT. CORP.	12640	12600		33400		18950	2380	4770	5900	2500	9350	1100	1300		1100
ANDERSEN CONSULTING	114380	16145	27990	46785	4755	83938	14420	20195	48708	14700	68480	3560	2955	74370	17970
ASK COMPUTER SYSTEMS	25730	4540	6265	12420	2130	15580	4510	4270	11025	7475	5890	7785	5455	10360	5445
AUTO DESK	10095	1675	2380	4630	1130	1380	420	340	1385	585	2600	1070	580	12260	6800
BMC SOFTWARE	10040	1685	2350	4625	1170	1520	460	390	1460	670	2230	1005	600	12200	6820
BOEING	2055	180	250	485	300	740	225	210	475	1350	4680	1400	735	60	5600
BOOLE & BABBAGE	4500	750	1065	2080	530	680	210	170	620	300	1050	445	245	5200	2700
BORLAND	18900	3195	4455	8685	1660	2685	795	685	2570	1180	4280	1700	1000	23410	7720
CADENCE DESIGN SYSTEMS	83210	13810	19715	38490		985			3640						
COGNOS INC	1390	435	605	1280	1380	1105	335	365	820	560	2805	4020	2610	4190	2555
COMPUTER ASSOC. INT.	60430	10210	14320	27920	5380	18980	5605	5145	15000	8885	30000	6170	3220	57660	41160
COMPUTER DATA SYSTEMS	4200	330	2810	3235	230	300	90	75	145	125	8740	440	105	390	8640
COMPUTER HORIZONS	3110		4140	16560		7285	4160	3120	3100	3090	18600			1040	
COMPUTER LANGUAGE RES	9565	1600	2265	4420	1035	1340	405	340	1260	585	2105	1000	535	11145	6255
COMPUTER SCIENCES	88620	13690	33635	35585	13640	58810	16650	15380	31220	26560	59945	8335	4710	106010	56430
COMPUTER TASK GROUP	56595	14815	8980	27270	1510	18445	7875	7595	12715	9055	31815	3480	2655	4370	8950
COMSHARE	11238	992	1340	2620	1100	7100	5180	1565	2785	2705	3270	1255	1200	2715	2450
CYCARE SYSTEMS														68095	
D&B SOFTWARE															
EDS	92890	26730	43565	83360	12350	106765	34455	32750	70750	42770	53000	6360	3310	227600	122460
FISERV															
GOAL SYSTEMS															
HBO														182000	
INFORMIX	9720	1730	2305	3750	720	1375	375	325	1375	560	2350	1080	560	11360	7140
INTERLEAF INC	5045	. 945	1270	2380	1055	2255	760	685	1350	1010	2660	650	420	4910	1915

Appendix D

	Media K	Schools R	State/ Loc. Gov G	Transp. T	Util. U	Whl.Dist J	Ret.Dist D	Finance F	Insur. N	Sec'ties S	Fed. Gov Y	TOTAL
ADOBE	7420	2385	1530	4240	2860	9460	8680	28700	11260	5000	7102	157000
ADP	67700	6700	1450	20900	18990	276291	121365	660825	121095	128925	40295	1854620
AGS - SEE NYNEX												
ALDUS	3975	1180	3975	3585	1582	5020	4107	12450	5070	2515	10905	89000
AMERICAN MANAGEMENT SYS	7300	11275	29500	8240	1988	1090	5521	48500	1150	2945	77280	301000
AMERICAN SOFTWARE	4180			3225	7000	8080	7015	5065		1060	810	103000
ANALYSTS INT. CORP.	4670	1100	1300				4550	8170	9300	3300		138380
ANDERSEN CONSULTING	47315	9685	70170	25400	58550	52150	141800	158950	121400	32400	72829	1350000
ASK COMPUTER SYSTEMS	18930	3410	10810	13635	19390	32885	14820	18775	3260	3140	13665	281600
AUTO DESK	4460	1945	980	3390	2625	9810	6530	28260	10630	5800	7240	129000
BMC SOFTWARE	4400	2000	1340	3450	2600	9910	6950	26400	10230	5435	8060	128000
BOEING	2870	7780	33315	370	690	635	580	2500	8880	395	243000	319760
BOOLE & BABBAGE	1925	785	440	1545	1060	4055	2800	11400	4400	2345	3700	55000
BORLAND	8000	2590	3910	6520	4425	17675	13595	52365	20120	10810	14070	237000
CADENCE DESIGN SYSTEMS	21600				20830		19320					221600
COGNOS INC	6370	1310	1475	1280	1080	14485	1795	5815	2660	835	240	61800
COMPUTER ASSOC. INT.	29835	13040	16990	16410	24340	62745	43910	161910	74665	29970	67100	851000
COMPUTER DATA SYSTEMS	4065	4450	23425	185	95	665	555	1680	310	335	91380	157000
COMPUTER HORIZONS	5175	2010	4170	4120	520	9315	2070	5190	520	1005		98300
COMPUTER LANGUAGE RES	4095	1825	1025	3125	2205	8730	6095	17920	9005	3670	7450	109000
COMPUTER SCIENCES	19990	22565	110020	11475	21980	58690	41870	103135	122410	20145	908500	2010000
COMPUTER TASK GROUP	14065	8730	10990	80	2120	17305	3095	7890	14210	8390		303000
COMSHARE	3435	2260	1370	1860	965	820	265	4205	100	2675	1530	67000
CYCARE SYSTEMS								4890		1015		74000
D&B SOFTWARE												
EDS	45640	52790	352100	23380	25210	79250	155100	281750	512140	60285	753240	3300000
FISERV								329000				329000
GOAL SYSTEMS												
HBO												182000
INFORMIX	4331	2050	925	3421	2400	9325	5605	23926	10437	4890	5965	118000
INTERLEAF INC	2770	885	2995	2755	1035	3745	3165	11068	4240	2252	9780	72000

Appendix D

	Media	Schools	State/ Loc. Gov	Transp.	Util.	Whl.Dist	Ret.Dist	Finance	Insur.	Sec'ties	Fed. Gov	TOTAL
	K	R	G	T	U	J	D	F	N	S	Y	
INTERMETRICS	2425	175	925	2080	690	630	2265	2725	2560	555	16795	60200
INTERSOLV	2450	325	1760	1305	155	5020	6980	10040	2210	2085	2630	52000
KEANE INC.		950	1970		1975		970	3900	16580	980		99500
KNOWLEDGEWARE	5350	1820	2770	2795	3072	8710	5605	25920	7900	5245	6740	122000
LEGENT	10585	5025	3260	8120	6420	23045	13750	62980	24590	12945	19505	302000
LOCKHEED	5880	9010	47770	13365	1735	5910	6720	16565	6940	3310	54010	245000
LOGICON											267820	274000
LOTUS	16750	5355	4375	13080	9275	36195	23035	99385	38760	20460	31245	468000
MARTIN MARIETTA	1595	6970	42575			12580	3670				571900	675000
MENTOR GRAPHICS CORP.	18915						16910					172000
MICROSOFT	51195	22025	24020	46720	27345	108400	75745	283740	131490	58425	100435	1463000
NATIONAL DATA	2410	1080	6595			3885	69285	69850		14610	10220	212000
NATIONAL EDUCATION CORP.	12070	1005	3020	3015	2020	3015	2010	16110	16090	7040	1000	120000
NOVELL	30865	14195	19080	26565	17710	65500	44035	190325	96100	39830	57250	933400
NYNEX	22745	9250	38300	35	6665	8770	30085	65950	17360	7225	16280	434000
ON-LINE SOFTWARE INT./CAI												
ORACLE	16530	6760	11590	7935	6870	29215	20600	93140	37800	19150	102300	510000
PANSOPHIC/CAI												
POLICY MANAGEMENT SYS									435000			435000
SHARED MEDICAL												425000
SHL SYSTEMHOUSE	2700	4220	24520	70	15	5000	10040	1410	55		32400	125000
SOFTWARE PUB.	3775	1800	760	3070	2125	8005	5290	22765	7300	4685	5630	104000
STERLING SOFTWARE	5880	2850	1540	4875	2700	15320	30090	43420	11585	8520	86485	268000
SUNGUARD	2325	5		540	5	560	2735	200100	17235	50030	150	292000
SYBASE INC	8985	1720	5500	3810	2290	7050	6960	35405	3910	7280	31830	187000
SYMANTEC CORP	6315	2150	7970	5675	2380	8455	7195	22005	9880	4480	22400	160000
SYSTEM CENTER	2145	1120	675	1800	1370	5030	3400	13310	5220	2710	4600	66000
SYSTEM SOFTWARE ASSOC.INC.						16565						93000
SYSTEMATICS(not incl. CP)								480000				480000
VALID LOGIC SYSTEMS INC.												
GRAND TOTAL	576406	260560	933180	307446	319357	1068996	1008533	3779784	1966057	609102	3785766	21874160

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IBM Forecast Systems Operations Segments

An analysis of the components of expenditures made to support systems operations services was undertaken to meet the needs of IBM. These expenditures represent the actual hardware software, maintenance, personnel and network costs that would be involved in the supply of systems operation services. These costs were estimated for 1991 and 1992 and forecast for the balance of the planning period based on INPUT experience with growth rates for these types of costs.

IBM FORECAST
SYSTEMS OPERATION SEGMENTS

SEGMENTATION	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	1998 ($M)	'92-'97 CAGR
HARDWARE	2513	2918	3386	3893	4475	5140	5850	6750	15%
NEW	477	554	677	856	1074	1388	1813	2362	27%
PREVIOUSLY PURCHASED	2036	2364	2709	3037	3401	3752	4037	4388	11%
SOFTWARE	2011	2334	2709	3183	3740	4395	5163	6068	17%
MAINTENANCE	704	817	948	1080	1232	1404	1601	1825	14%
PERSONNEL	4021	4668	5418	6305	7403	8708	10232	12087	17%
NETWORK COSTS	804	934	1084	1301	1657	2124	2733	3489	24%
TOTAL	10053	11671	13545	15762	18507	21771	25579	30219	17%

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INPUT-Defined Industry Sectors

Industry Sector Definitions

Industry Sector	SIC Code	Description
Discrete Manufacturing	23xx	Apparel and other finished products
	25xx	Furniture and fixtures
	27xx	Printing, publishing and allied industries
	31xx	Leather and leather products
	34xx	Fabricated metal products, except machinery and transportation equipment
	35xx	Industrial and commercial machinery and computer equipment
	36xx	Electronic and other electrical equipment and components, except computer equipment
	37xx	Transportation equipment
	38xx	Instruments; photo/med/optical goods; watches/clocks
	39xx	Miscellaneous manufacturing industry
Process Manufacturing	10xx	Metal mining
	12xx	Coal mining
	13xx	Oil and gas extraction
	14xx	Mining/quarrying nonmetalic minerals
	20xx	Food and kindred products
	21xx	Tobacco products
	22xx	Textile mill products
	24xx	Lumber and wood products, except furniture
	26xx	Paper and allied products
	28xx	Chemicals and allied products
	29xx	Petroleum refining and related industries
	30xx	Rubber and miscellaneous plastic products
	32xx	Stone, clay, glass and concrete products
	33xx	Primary metal industries
Transportation Services	40xx	Railroad transport
	41xx	Public transit/transport
	42xx	Motor freight transport/warehousing
	43xx	U.S. Postal Service
	44xx	Water transportation
	45xx	Air transportation (including airline reservation services in 4512)
	46xx	Pipelines, except natural gas
	47xx	Transportation services (including 472x, arrangement of passenger transportation)

Industry Sector Definitions

Industry Sector	SIC Code	Description
Telecommunications	48xx	Communications
Utilities	49xx	Electric, gas and sanitary services
Retail Distribution	52xx	Building materials
	53xx	General merchandise stores
	54xx	Food stores
	55xx	Automotive dealers, gas stations
	56xx	Apparel and accessory stores
	57xx	Home furniture, furnishings and accessory stores
	58xx	Eating and drinking places
	59xx	Miscellaneous retail
Wholesale Distribution	50xx	Wholesale trade - durable goods
	51xx	Wholesale trade - nondurable goods
Banking and Finance	60xx	Depositary institutions
	61xx	Nondepositary institutions
	62xx	Security and commodity brokers, dealers, exchanges and services
	67xx	Holding and other investment offices
Insurance	63xx	Insurance carriers
	64xx	Insurance agents, brokers and services
Health Services	80xx	Health services
Education	82xx	Educational services

Industry Sector Definitions

Industry Sector	SIC Code	Description
Business Services	65xx	Real estate
	70xx	Hotels, rooming houses, camps, and other lodging places
	72xx	Personal services
	73xx	Business services (except hotel reservation services in 7389)
	7389x	Hotel reservation services
	75xx	Automotive repair, services and parking
	76xx	Miscellaneous repair services
	78xx	Motion pictures
	79xx	Amusement and recreation services
	81xx	Legal services
	83xx	Social services
	84xx	Museums, art galleries, and botanical/zoological gardens
	86xx	Membership organizations
	87xx	Engineering, accounting, research, management, and related services
	89xx	Miscellaneous services
Federal Government	9xxx	
State and Local Government	9xxx	
Miscellaneous Industries	01xx	Agricultural production - crops
	02xx	Agricultural production - livestock/animals
	07xx	Agricultural services
	08xx	Forestry
	09xx	Fishing, hunting and trapping
	15xx	Building construction - general contractors, operative builders
	16xx	Heavy construction - contractors
	17xx	Construction - special trade contractors

IBM-Defined Industry Sectors

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
A1		MEDIUM/SMALL TELEPHONE COMPANIES
	4813	MEDIUM / SMALL TELEPHONE COMPANIES
A2		AMERICAN TELEPHONE AND TELEGRAPH
	481A	AMERICAN TELEPHONE AND TELEGRAPH (AT&T)
A3		LARGE TELEPHONE COMPANIES
	481B	LARGE TELEPHONE COMPANIES
A4		COMMON CARRIERS
	4822	COMMON CARRIERS
A5		CABLE TV AND MISCELLANEOUS COMPANIES
	4812	RADIOTELEPHONE COMMUNICATIONS
	4841	CABLE AND OTHER PAY TV SERVICES
	4899	COMMUNICATION SERVICES, NEC
BC		CONSULTANTS - COMPUTER SERVICERS
	738C	CONSULTANTS - COMPUTER SERVICERS
BD		DISTRIBUTION - COMPUTER SERVICERS
	738D	DISTRIBUTION - COMPUTER SERVICERS
BE		HIGHER EDUCATION - COMPUTER SERVICERS
	738E	EDUCATION - COMPUTER SERVICERS
BF		FINANCE/SECURITIES - COMPUTER SERVICERS
	738F	FINANCE/SECURITIES - COMPUTER SERVICERS
BG		STATE AND LOCAL - COMPUTER SERVICERS
	738G	STATE AND LOCAL - COMPUTER SERVICERS
BH		MEDICAL - COMPUTER SERVICERS
	738H	MEDICAL - COMPUTER SERVICERS
BK		MEDIA - COMPUTER SERVICERS
	738K	MEDIA - COMPUTER SERVICERS
BM		MANUFACTURING - COMPUTER SERVICERS
	738M	MANUFACTURING - COMPUTER SERVICERS
BN		INSURANCE - COMPUTER SERVICERS
	738N	INSURANCE - COMPUTER SERVICERS
BP		PROCESS - COMPUTER SERVICERS
	738P	PROCESS - COMPUTER SERVICERS
BR		POINT OF SALE VALUE ADDED DISTRIBUTORS
	737R	POINT OF SALE VALUE ADDED DISTRIBUTORS

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
BT		TRANSPORTATION - COMPUTER SERVICERS
	738T	TRANSPORTATION - COMPUTER SERVICERS
BU		PUBLIC UTILITIES - COMPUTER SERVICERS
	738U	PUBLIC UTILITIES - COMPUTER SERVICERS
BY		FEDERAL - COMPUTER SERVICERS
	738Y	FEDERAL - COMPUTER SERVICERS
B1		SERVICE BUREAUS
	7374	DATA PROCESSING AND PREPARATION
B2		INFORMATION SYSTEMS CONSULTANTS
	7379	COMPUTER CONSULTANTS AND RELATED SERVICES, NEC
B3		DP EDUCATION FIRMS
	8243	DATA PROCESSING EDUCATION FIRMS
B4		REMOTE COMPUTING SERVICERS
	737B	REMOTE COMPUTING SERVICERS
	7375	INFORMATION RETRIEVAL SERVICES
B5		SYSTEMS INTEGRATORS
	7373	COMPUTER INTEGRATED SYSTEMS DESIGN
B6		COMPUTER FACILITY MANAGEMENT FIRMS
	7376	COMPUTER FACILITIES MANAGEMENT
B7		CONTRACT PROGRAMMING
	7371	COMPUTER PROGRAMMING SERVICES
B8		PACKAGE PROGRAMMING
	7372	PREPACKAGED SOFTWARE
C1		MANAGEMENT CONSULTANTS
	8741	MANAGEMENT SERVICES
	8742	MANAGEMENT CONSULTING SERVICES
	8743	PUBLIC RELATIONS SERVICES
	8748	BUSINESS CONSULTING, NEC
C2		CPA FIRMS & PUBLIC ACCOUNTANTS
	8721	ACCOUNTING, BOOKKEEPING AND AUDITING
C3		LEGAL FIRMS
	8111	LEGAL SERVICES
DA		APPAREL MANUFACTURERS
	2251	WOMENS HOSIERY, EXCEPT SOCKS
	2252	HOSIERY, NEC

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	2253	KNIT OUTERWEAR MILLS
	2254	KNIT UNDERWEAR MILLS
	2259	KNITTING MILLS, NEC
	2311	MEN'S AND BOYS' SUITS AND COATS
	2321	MEN'S AND BOYS' SHIRTS
	2322	MEN'S AND BOYS' UNDERWEAR AND NIGHTWEAR
	2323	MEN'S AND BOYS' NECKWEAR
	2325	MEN'S AND BOYS' TROUSERS AND SLACKS
	2326	MEN'S AND BOYS' WORK CLOTHING
	2329	MEN'S AND BOYS' CLOTHING, NEC
	2331	WOMEN'S AND MISSES' BLOUSES AND SHIRTS
	2335	WOMEN'S, JUNIORS' AND MISSES' DRESSES
	2337	WOMEN'S AND MISSES' SUITS AND COATS
	2339	WOMEN'S AND MISSES' OUTERWEAR, NEC
	2341	WOMEN'S AND CHILDREN'S UNDERWEAR
	2342	BRAS, GIRDLES, AND ALLIED GARMENTS
	2353	HATS, CAPS AND MILLINERY
	2361	GIRLS' AND CHILDREN'S DRESSES AND BLOUSES
	2369	GIRLS' AND CHILDREN'S OUTERWEAR, NEC
	2371	FUR GOODS
	2381	FABRIC DRESS AND WORK GLOVES
	2384	ROBES AND DRESSING GOWNS
	2385	WATERPROOF OUTERWEAR
	2386	LEATHER AND SHEEP-LINED CLOTHING
	2387	APPAREL BELTS
	2389	APPAREL AND ACCESSORIES, NEC
	2391	CURTAINS AND DRAPERIES
	2392	HOUSEFURNISHINGS, NEC
	2393	TEXTILE BAGS
	2394	CANVAS AND RELATED PRODUCTS
	2395	PLEATING AND STITCHING
	2396	AUTOMOTIVE AND APPAREL TRIMMINGS
	2397	SCHIFFLI MACHINE EMBROIDERIES
	2399	FABRICATED TEXTILE PRODUCTS, NEC
	3111	LEATHER TANNING AND FINISHING
	3131	FOOTWEAR CUT STOCK
	3142	HOUSE SLIPPERS
	3143	MEN'S FOOTWEAR, EXCEPT ATHLETIC
	3144	WOMEN'S FOOTWEAR, EXCEPT ATHLETIC
	3149	FOOTWEAR, EXCEPT RUBBER, NEC
	3151	LEATHER GLOVES AND MITTENS
	3161	LUGGAGE
	3171	WOMENS HANDBAGS AND PURSES
	3172	PERSONAL LEATHER GOODS, NEC
	3199	LEATHER GOODS, NEC
D1		GENERAL MERCHANDISE RETAILERS
	5211	LUMBER AND OTHER BUILDING MATERIALS
	5231	PAINT, GLASS, AND WALLPAPER STORES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	5251	HARDWARE STORES
	5261	RETAIL NURSERIES, LAWN AND GARDEN STORES
	5311	DEPARTMENT STORES
	533A	DISCOUNT STORES
	5331	VARIETY STORES
	5399	MISCELLANEOUS GENERAL MERCHANDISE STORES
	5611	MEN'S AND BOYS' CLOTHING STORES
	5621	WOMEN'S CLOTHING STORES
	5632	WOMEN'S ACCESSORY AND SPECIALITY STORES
	5641	CHILDREN'S AND INFANTS' WEAR STORES
	5651	FAMILY CLOTHING STORES
	5661	SHOE STORES
	5699	MISCELLANEOUS APPAREL & ACCESSORY STORES
	5712	FURNITURE STORES
	5713	FLOOR COVERING STORES
	5714	DRAPERY, CURTAIN, AND UPHOLSTERY STORES
	5719	MISCELLANEOUS HOMEFURNISHING STORES
	5722	HOUSEHOLD APPLIANCE STORES
	5731	RADIO, TV AND ELECTRONIC STORES
	5734	COMPUTER AND SOFTWARE STORES
	5735	RECORD AND PRERECORDED TAPE STORES
	5736	MUSICAL INSTRUMENTS STORES
	5932	USED MERCHANDISE STORES
	5941	SPORTING GOODS AND BICYCLE SHOPS
	5942	BOOK STORES
	5943	STATIONERY STORES
	5944	JEWELRY STORES
	5945	HOBBY, TOY AND GAME SHOPS
	5946	CAMERA AND PHOTOGRAPHIC SUPPLY STORES
	5947	GIFT, NOVELTY AND SOUVENIR SHOPS
	5948	LUGGAGE AND LEATHER GOODS STORES
	5949	SEWING, NEEDLEWORK, AND PIECE GOODS
	5961	CATALOG AND MAIL-ORDER HOUSES
	5983	FUEL OIL DEALERS
	5984	LIQUIFIED PETROLEUM GAS DEALERS
	5989	FUEL DEALERS, NEC
	5992	FLORIST STORES
	5993	TOBACCO STORES AND STANDS
	5994	NEWSPAPER AND NEWSSTANDS
	5995	OPTICAL GOODS STORES
	5999	MISCELLANEOUS RETAIL STORES, NEC
D2		FOOD AND DRUG RETAILERS
	5411	GROCERY STORES
	5421	MEAT AND FISH MARKETS
	5431	FRUIT AND VEGETABLE MARKETS
	5441	CANDY, NUT, AND CONFECTIONERY STORES
	5451	DAIRY PRODUCTS STORES
	5461	RETAIL BAKERIES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	5499	MISCELLANEOUS FOOD STORES
	5812	EATING PLACES
	5813	DRINKING PLACES (ALCOHOLIC BEVERAGES)
	5912	DRUG STORES AND PROPRIETARY STORES
	5921	LIQUOR STORES
	5962	VENDING MACHINE OPERATORS
	5963	DIRECT SELLING ESTABLISHMENTS
E1		UNIVERSITIES, PROFESSIONAL SCHOOLS
	822A	MEDICAL SCHOOLS
	822B	PRIVATE UNIVERSITIES
	822H	PUBLIC UNIVERSITIES
	822J	UNIVERSITIES - CONSORTIA
	942E	UNIVERSITIES, STATE ENTERPRISE
	952E	UNIVERSITIES, COUNTY ENTERPRISE
	962E	UNIVERSITIES, CITY ENTERPRISE
E2		FOUR YEAR COLLEGES
	822C	PRIVATE FOUR YEAR COLLEGES
	822K	FOUR YEAR COLLEGES - CONSORTIA
	8221	PUBLIC FOUR YEAR COLLEGES
	942C	4 YEAR COLLEGES, STATE ENTERPRISE
	952C	4 YEAR COLLEGES, COUNTY ENTERPRISE
	962C	4 YEAR COLLEGES, CITY ENTERPRISE
E3		JUNIOR AND COMMUNITY COLLEGES
	822L	JUNIOR/COMMUNITY COLLEGES - CONSORTIA
	8222	JUNIOR AND COMMUNITY COLLEGES
	942B	JR./COMMUNITY COLLEGES, STATE ENTERPRISE
	952B	JR./COMMUNITY COLLEGES, COUNTY ENTERPRISE
	962B	JR./COMMUNITY COLLEGES, CITY ENTERPRISE
E4		MISCELLANEOUS HIGHER EDUCATION
	731E	PURCHASING AGENCIES, HIGHER EDUCATION
	8299	SCHOOLS AND EDUCATIONAL SERVICES/LABS
	8733	NONCOMMERCIAL RESEARCH ORGANIZATIONS
	9420	STATE BD OF EDUCATION-ADM/VOC/ETC
E5		LIBRARIES
	823A	LIBRARY NETWORKS AND UTILITIES
	8231	UNIVERSITY AND COLLEGE LIBRARIES
	9404	STATE LIBRARIES
	9504	COUNTY LIBRARIES
	9604	CITY LIBRARIES
E6		MUSEUMS, ZOOS
	8412	MUSEUMS AND ART GALLERIES
	8422	ARBORETA, ZOOLOGICAL AND BOTANICAL GARDENS

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
E7		FOR-PROFIT HIGHER EDUCATION INSTITUTIONS
	822M	FOR-PROFIT HIGHER ED. INSTITUTIONS (ACCREDITED)
FX		REAL ESTATE
	6162	MORTGAGE BANKERS CORRESPONDENTS EX-LOAN
	6163	LOAN BROKERS EXCL-LOAN CORRESPONDENTS
	6517	LESSORS OF RAILROAD PROPERTY
	653A	COMBINED REAL ESTATE, INSURANCE
	6531	REAL ESTATE AGENTS, BROKERS, AND MANAGERS
	6553	CEMETERY SUBDIVIDERS AND DEVELOPERS
F1		COMMERCIAL BANKS - NOT BANK HOLDING CO.
	6011	FEDERAL RESERVE BANKS
	6019	CENTRAL RESERVE DEPOSITORY, NEC
	6022	STATE COMMERCIAL BANKS, FEDERAL RESERVE
	6022	STATE COMMERCIAL BANKS, FEDERAL RESERVE
	6023	STATE COMMERCIAL BANKS, NOT FED. RES., FDIC
	6023	STATE COMMERCIAL BANKS, NOT FED. RES., FDIC
	6024	STATE COMMERCIAL BANKS, NOT FED. RES., NOT FDIC
	6024	STATE COMMERCIAL BANKS, NOT FED. RES., NOT FDIC
	6025	NATIONAL BANKS, FEDERAL RESERVE
	6025	NATIONAL BANKS, FEDERAL RESERVE
	6028	PRIVATE BANKS, NOT INC., NOT FDIC
	6028	PRIVATE BANKS, NOT INC., NOT FDIC
F2		REGISTERED BANK HOLDING COMPANIES
	6712	BANK HOLDING COMPANIES
F3		CREDIT UNIONS
	6061	FEDERAL CREDIT UNIONS
	6062	STATE CREDIT UNIONS
F4		SAVINGS/SAVINGS & LOAN
	603A	MUTUAL SAVINGS BANKS, FEDERAL
	603B	MUTUAL SAVINGS BANKS, EXC. FEDERAL
	6035	FEDERAL SAVINGS INSTITUTIONS
	6036	SAVINGS INSTITUTIONS, EXC. FEDERAL
F5		ALL OTHER FINANCIAL
	6081	FOREIGN BANKS, BRANCHES AND AGENCIES
	6082	FOREIGN TRADE AND INTERNATIONAL BANKS
	6091	NONDEPOSIT TRUST FACILITIES
	6099	FUNCTIONS RELATED TO DEPOSIT BANKING
	6111	FEDERAL AND FEDERALLY SPONSORED CREDIT AGENCIES
	6141	PERSONAL CREDIT INSTITUTIONS
	6153	SHORT-TERM BUSINESS CREDIT INSTITUTIONS
	6159	MISC. BUSINESS CREDIT INSTITUTIONS
	651B	LESSORS OF COMPUTER EQUIP. - OWN INTERNAL USE
	6719	HOLDING COMPANIES, NEC

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	6798	REAL ESTATE INVESTMENT TRUSTS
	873F	COMMERCIAL PHYSICAL RESEARCH, FINANCE
G1		STATE GOVERNMENT
	9400	PUBLIC GAMING
	9402	PARKS AND BEACHES
	9407	TAX - INCOME,PROPERTY
	9408	PLANNING AND DEVELOPMENT
	9411	EXECUTIVE BRANCH
	9412	PERSONNEL
	9413	FINANCE
	9414	REVENUE
	9415	REGULATORY AGENCIES
	9416	ALCOHOLIC BEV CNTRL
	9417	LEGISLATIVE
	9418	JUSTICE ADMINISTRATION
	9419	CENTRAL DATA PROCESSING AUTHORITY
	9425	FOOD STAMPS
	9427	PROSECUTOR
	9430	TRAFFIC CONTROL
	9431	MOTOR VEHICLE ADMINISTRATION
	9432	HIGHWAY ADMINISTRATION AND CONSTRUCTION
	9433	TOLL ROADS, BRIDGES AND TUNNELS
	9436	WATERWAYS ADMIN REG
	9439	TRANSPORTATION, NEC
	9440	MENTAL HEALTH ADMINISTRATION
	9441	PUBLIC HEALTH ADMINISTRATION
	9442	AIR POLLUTION CONTROL
	9443	WATER POLLUTION CONTROL
	9444	SOCIAL SERVICES
	9445	GENERAL ASSISTANCE
	9446	PUBLIC ASSISTANCE - CATEGORICAL AID
	9447	PREVENTIVE SERVICES
	9448	MEDICAID
	9449	HEALTH/WELFARE, NEC
	9450	PROBATION
	9451	PAROLE
	9452	LAW ENFORCEMENT
	9453	CORRECTIONS/JAILS
	9454	FIRE
	9455	EMERGENCY SERVICES
	9457	DISPOSAL, LAND FILL
	9459	COURTS
	9460	WASTE WEIGHTING SCHEDULE
	9461	COMPUTER AIDED DISPATCH (E911) - LAW ENFORCEMENT
	9462	RECORDS MANAGEMENT - LAW ENFORCEMENT
	9463	IDENTIFICATION (AFIS)
	9464	COMPUTER AIDED DISPATCH (E911) - FIRE
	9465	RECORDS MANAGEMENT - FIRE

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	9469	NATURAL RESOURCES, NEC
	9471	BUILDING ADMIN.
	9472	PUBLIC HOUSING
	9473	PUBLIC CONSTRUCTION AND BUILDINGS
	9474	PUBLIC LAND ADMIN.
	9475	URBAN RENEWAL
	9476	URBAN SYSTEMS
	9479	PUBLIC WORKS, NEC
	9481	LABOR ADMINISTRATION
	9482	EMPLOYMENT SECURITY ADMINISTRATION
	9483	EMPLOYMENT SERVICES
	9484	UNEMPLOYMENT INSURANCE
	9485	WORKMENS COMPENSATION
	9486	STATE INSURANCE FUND
	9487	JTPA/CETA
	9490	PARKING STRUCTURE
	9492	ELECTION BOARDS / VOTER REGISTRATION
	9494	WATER SYSTEMS
	9495	SANITARY SERVICES
	9496	ENVIRONMENTAL SERVICES
	9498	INTERSTATE ORGAN., AUTHOR. & COMM., ETC.
	9499	UTILITIES, NEC
G2		CITY GOVERNMENT
	9600	PUBLIC GAMING
	9602	PARKS AND BEACHES
	9608	PLANNING AND DEVELOPMENT
	9610	RECORDS MANAGEMENT
	9611	EXECUTIVE BRANCH
	9612	PERSONNEL
	9613	FINANCE
	9614	REVENUE
	9615	REGULATORY AGENCIES
	9616	ALCOHOLIC BEV CNTRL
	9617	LEGISLATIVE
	9618	JUSTICE ADMINISTRATION
	9619	CENTRAL DP AUTHORITY
	9621	ADMINISTRATION
	9624	CENTRAL SERVICES
	9625	FOOD STAMPS
	9627	PROSECUTOR
	9630	TRAFFIC CONTROL
	9631	MOTOR VEHICLE ADMINISTRATION
	9632	HIGHWAY ADMINISTRATION - CONST. & MAINT.
	9633	TOLL ROADS, BRIDGES AND TUNNELS
	9635	MASS TRANSIT
	9636	WASTEWAYS ADMINISTRATION, REG.
	9639	TRANSPORTATION, NEC
	9640	MENTAL HEALTH ADMINISTRATION

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	9641	PUBLIC HEALTH ADMINISTRATION
	9642	AIR POLLUTION CONTROL
	9643	WATER POLLUTION CONTROL
	9644	SOCIAL SERVICES
	9645	GENERAL ASSISTANCE
	9646	PUBLIC ASSISTANCE - CATEGORICAL AID
	9647	PREVENTIVE SERVICES
	9649	HEALTH/WELFARE, NEC
	9650	PROBATION
	9651	PAROLE
	9652	LAW ENFORCEMENT
	9653	CORRECTIONS/JAILS
	9654	FIRE
	9655	EMERGENCY SERVICES
	9657	DISPOSAL, LAND FILL
	9658	PLANNING BOARD
	9659	COURTS
	9660	WASTE WEIGHTING, SCH
	9661	COMPUTER AIDED DISPATCH (E911) - LAW ENFORCEMENT
	9662	RECORDS MANAGEMENT - LAW ENFORCEMENT
	9663	IDENTIFICATION (AFIS)
	9664	COMPUTER AIDED DISPATCH (E911) - FIRE
	9665	RECORDS MANAGEMENT - FIRE
	9669	NATURAL RESOURCES, NEC
	9671	BUILDING ADMIN.
	9672	PUBLIC HOUSING
	9673	PUBLIC CONSTRUCTION AND BUILDINGS
	9674	PUBLIC LAND ADMINISTRATION
	9675	URBAN RENEWAL
	9676	URBAN SYSTEMS
	9679	PUBLIC WORKS, NEC
	9687	JTPA/CETA
	9688	AIRPORT TERMINAL SERVICES
	9690	PARKING STRUCTURE
	9692	ELECTION BOARDS / VOTER REGISTRATION
	9694	WATER SUPPLY
	9695	SANITARY SERVICES
	9696	ENVIRONMENTAL SERVICES
	9699	UTILITIES, NEC
G3		COUNTY GOVERNMENT
	9502	PARKS AND BEACHES
	9505	BUDGET APPROP.-ACCTG
	9507	TAX-INCOME,PROPERTY
	9508	PLANNING AND DEVELOPMENT
	9510	RECORDS MANAGEMENT
	9511	EXECUTIVE BRANCH
	9512	PERSONNEL
	9513	FINANCE

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	9514	REVENUE
	9515	REGULATORY AGENCIES
	9517	LEGISLATIVE
	9518	JUSTICE ADMINISTRATION
	9519	CENTRAL DP AUTHORITY
	9521	ADMINISTRATION
	9524	CENTRAL SERVICES
	9525	FOOD STAMPS
	9527	PROSECUTOR
	9530	TRAFFIC CONTROL
	9531	MOTOR VEHICLE ADMINISTRATION
	9532	HIGHWAY ADMINISTRATION - CONST. & MAINT.
	9533	TOLL ROADS, BRIDGES AND TUNNELS
	9535	MASS TRANSIT
	9536	WASTEWAYS ADMINISTRATION, REG.
	9539	TRANSPORTATION, NEC
	9540	MENTAL HEALTH ADMINISTRATION
	9541	PUBLIC HEALTH ADMINISTRATION
	9542	AIR POLLUTION CONTROL
	9543	WATER POLLUTION CONTROL
	9544	SOCIAL SERVICES
	9545	GENERAL ASSISTANCE
	9546	PUBLIC ASSISTANCE - CATEGORICAL AID
	9547	PREVENTIVE SERVICES
	9549	HEALTH/WELFARE NEC
	9550	PROBATION
	9551	PAROLE
	9552	LAW ENFORCEMENT
	9553	CORRECTIONS/JAILS
	9554	FIRE
	9555	EMERGENCY SERVICES
	9557	DISPOSAL, LAND FILL
	9558	PLANNING BOARD
	9559	COURTS
	9560	WASTE WEIGHTING, SCH
	9561	COMPUTER AIDED DISPATCH (E911) - LAW ENFORCEMENT
	9562	RECORDS MANAGEMENT - LAW ENFORCEMENT
	9563	IDENTIFICATION (AFIS)
	9564	COMPUTER AIDED DISPATCH (E911) - FIRE
	9565	RECORDS MANAGEMENT - FIRE
	9569	NATURAL RESOURCES, NEC
	9571	BUILDING ADMIN.
	9574	PUBLIC LAND ADMINISTRATION
	9579	PUBLIC WORKS, NEC
	9587	JTPA/CETA
	9588	AIRPORT TERMINAL SERVICES
	9590	PARKING STRUCTURE
	9592	ELECTION BOARDS / VOTER REGISTRATION
	9594	WATER SUPPLY

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	9595	SANITARY SERVICES
	9596	ENVIRONMENTAL SERVICES
	9599	UTILITIES, NEC
G4		SPECIAL DISTRICTS
	9708	ADMINISTRATION & PLANNING
	9718	JUSTICE ADMINISTRATION
	9727	PROSECUTOR
	9735	TRANSPORTATION
	9750	PROBATION
	9751	PAROLE
	9752	LAW ENFORCEMENT
	9753	CORRECTIONS/JAILS
	9754	FIRE
	9755	EMERGENCY SERVICES
	9759	COURTS
	9761	COMPUTER AIDED DISPATCH (E911) - LAW ENFORCEMENT
	9762	RECORDS MANAGEMENT - LAW ENFORCEMENT
	9763	IDENTIFICATION (AFIS)
	9764	COMPUTER AIDED DISPATCH (E911) - FIRE
	9765	RECORDS MANAGEMENT - FIRE
	9796	ENVIRONMENTAL SERVICES
H1		SHORT TERM HOSPITALS/UNIVERSITY HOSPITALS
	806A	UNIVERSITY HOSPITALS
	8062	GENERAL MEDICAL AND SURGICAL HOSPITALS
H2		LONG TERM HOSPITALS
	8063	PSYCHIATRIC HOSPITALS
	8069	OTHER LONG TERM HOSPITALS
H3		ALTERNATE HEALTH CARE FACILITIES
	8051	SKILLED NURSING CARE FACILITIES
	8059	NURSING AND PERSONAL CARE, NEC
	8082	HOME HEALTH CARE SERVICES
H4		MEDICAL GROUP CLINICS/OFFICES OF PHYSICIANS
	8011	OFFICES AND CLINICS OF MEDICAL DOCTORS
	8021	OFFICES AND CLINICS OF DENTISTS
	8031	OFFICES AND CLINICS OF OSTEOPATHIC PHYSICIANS
	8041	OFFICES AND CLINICS OF CHIROPRACTORS
	8042	OFFICES AND CLINICS OF OPTOMETRISTS
	8043	OFFICES AND CLINICS OF PODIATRISTS
	8049	OFFICES OF HEALTH PRACTITIONERS, NEC
	8052	MED GRP PRAC CLINICS
	8093	SPECIALITY OUTPATIENT CLINICS
H6		HEALTH DATA SERVICES
	809E	HEALTH DATA SERVICES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	942H	HEALTH SERVICES, STATE ENTERPRISE
	952H	HEALTH SERVICES, COUNTY ENTERPRISE
	962H	HEALTH SERVICES, CITY ENTERPRISE
H7		HEALTH CONSULTANTS
	809B	CONSULTANTS - MEDICAL
H8		CLINICAL LABS
	8071	MEDICAL LABORATORIES
	8072	DENTAL LABORATORIES
H9		HEALTH - OTHER
	731H	PURCHASING AGENCIES, HEALTH
	809A	HEALTH CARE COMPLEXES - REGIONAL MEDICAL PGMS
	809C	AR MEDIQUEST
	809D	COMP COMM HEALTH CENTERS
	8092	KIDNEY DIALYSIS CENTERS
	8099	HEALTH AND ALLIED SERVICES, NEC
	862A	PROFESSIONAL MEDICAL ASSOCIATIONS
	873H	COMMERCIAL PHYSICAL RESEARCH, MEDICAL
J2		AUTO/MOTOR VEH. - DEALERS, PARTS & REPAIR
	5012	AUTOMOBILES AND OTHER MOTOR VEHICLES
	5013	MOTOR VEHICLE SUPPLIES AND NEW PARTS
	5014	TIRES AND TUBES
	5015	MOTOR VEHICLE PARTS, USED
	5082	CONSTRUCTION AND MINING MACHINERY
	5083	FARM AND GARDEN MACHINERY
	5271	MOBILE HOMES
	5511	NEW AND USED CAR DEALERS
	5521	USED CAR DEALERS
	5531	AUTO AND HOME SUPPLY STORES
	5551	BOAT DEALERS
	5561	RECREATION VEHICLE DEALERS
	5571	MOTORCYCLE DEALERS
	5599	AUTOMOTIVE DEALERS, NEC
	7532	TOP AND BODY REPAIR AND PAINT SHOPS
	7533	AUTOMOTIVE EXHAUST SYSTEM REPAIR SHOPS
	7534	TIRE RETREADING AND REPAIR SHOPS
	7536	AUTOMOTIVE GLASS REPLACEMENT SHOPS
	7537	AUTOMOTIVE TRANSMISSION REPAIR SHOPS
	7538	GENERAL AUTOMOBILE REPAIR SHOPS
	7539	AUTOMOBILE REPAIR SHOPS, NEC
	7542	CARWASHES
	7549	AUTOMOTIVE SERVICES, NEC
J3		NON-DURABLE GOODS WHOLESALERS
	5111	PRINTING AND WRITING PAPER
	5112	STATIONERY AND OFFICE SUPPLIES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	5113	INDUSTRIAL AND PERSONAL SERVICE PAPER
	5122	DRUGS, PROPRIETARIES, AND SUNDRIES
	5131	PIECE GOODS AND NOTIONS
	5136	MEN'S AND BOYS' CLOTHING
	5137	WOMEN'S AND CHILDREN'S CLOTHING
	5139	FOOTWEAR
	5141	GROCERIES, GENERAL LINE
	5142	PACKAGED FROZEN FOODS
	5143	DAIRY PRODUCTS, EXC. DRIED OR CANNED
	5144	POULTRY AND POULTRY PRODUCTS
	5145	CONFECTIONERY
	5146	FISH AND SEAFOODS
	5147	MEATS AND MEAT PRODUCTS
	5148	FRESH FRUITS AND VEGETABLES
	5149	GROCERIES AND RELATED PRODUCTS, NEC
	5153	GRAIN AND FIELD BEANS
	5154	LIVESTOCK
	5159	FARM-PRODUCT RAW MATERIAL, NEC
	5162	PLASTICS MATERIALS AND BASIC SHAPES
	5169	CHEMICALS AND ALLIED PRODUCTS, NEC
	5181	BEER AND ALE
	5182	WINES AND DISTILLED BEVERAGES
	5191	FARM SUPPLY
	5192	BOOKS, PERIODICALS, AND NEWSPAPERS
	5193	FLOWERS AND FLORIST SUPPLIES
	5194	TOBACCO AND TOBACCO PRODUCTS
	5198	PAINTS, VARNISHES, AND SUPPLIES
	5199	NONDURABLE GOODS, NEC
J4		DURABLE GOODS WHOLESALERS
	5021	FURNITURE
	5023	HOMEFURNISHINGS
	5031	LUMBER, PLYWOOD, AND MILLWORK
	5032	BRICK, STONE AND RELATED MATERIALS
	5033	ROOFING, SIDING, AND INSULATION
	5039	CONSTRUCTION MATERIALS, NEC
	5043	PHOTOGRAPHIC EQUIPMENT AND SUPPLIES
	5044	OFFICE EQUIPMENT
	5045	COMPUTERS, PERIPHERALS, AND SOFTWARE
	5046	COMMERCIAL EQUIPMENT, NEC
	5047	MEDICAL AND HOSPITAL EQUIPMENT
	5048	OPTHALMIC GOODS
	5049	PROFESSIONAL EQUIPMENT, NEC
	5051	METALS SERVICE CENTERS AND OFFICES
	5052	COAL AND OTHER MINERALS AND ORES
	5063	ELECTRICAL APPARATUS AND EQUIPMENT
	5064	ELECTRICAL APPLIANCES, TV, AND RADIOS
	5065	ELECTRONIC PARTS AND EQUIPMENT
	5072	HARDWARE

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	5074	PLUMBING AND HYDRONIC HEATING SUPPLIES
	5075	WARM AIR HEATING AND AIR CONDITIONING
	5078	REFRIGERATION EQUIPMENT AND SUPPLIES
	5084	INDUSTRIAL MACHINERY AND EQUIPMENT
	5085	INDUSTRIAL SUPPLIES
	5087	SERVICE ESTABLISHMENT EQUIPMENT
	5088	TRANSPORTATION EQUIPMENT AND SUPPLIES
	5091	SPORTING AND RECREATIONAL GOODS
	5092	TOYS AND HOBBY GOODS AND SUPPLIES
	5093	SCRAP AND WASTE MATERIALS
	5094	JEWELRY, WATCHES, AND PRECIOUS STONES
	5099	MISCELLANEOUS DURABLE GOODS, NEC
J5		REPAIR SERVICES
	7622	RADIO AND TELEVISION REPAIR SHOPS
	7623	REFRIGERATION SERVICE AND REPAIR
	7629	ELECTRICAL REPAIR SHOPS, NEC
	7631	WATCH, CLOCK, AND JEWELRY REPAIR
	7641	REUPHOLSTERY AND FURNITURE REPAIR
	7692	WELDING REPAIR
	7694	ARMATURE REWINDING SHOPS
	7699	MISCELLANEOUS REPAIR SERVICES, NEC
J6		PERSONAL SERVICES
	7211	POWER LAUNDRIES, FAMILY AND COMMERCIAL
	7212	GARMENT PRESSING AND CLEANERS AGENTS
	7213	LINEN SUPPLY
	7215	COIN-OPERATED LAUNDRIES AND CLEANING
	7216	DRYCLEANING PLANTS, EXCEPT RUG
	7217	CARPET AND UPHOLSTERY CLEANING
	7218	INDUSTRIAL LAUNDERERS
	7219	LAUNDRY AND GARMENT SERVICES, NEC
	7221	PHOTOGRAPHIC STUDIOS, PORTRAIT
	7231	BEAUTY SHOPS
	7241	BARBER SHOPS
	7251	SHOE REPAIR AND SHOESHINE PARLORS
	7261	FUNERAL SERVICE AND CREMATORIES
	7291	TAX RETURN PREPARATION SERVICES
	7299	MISCELLANEOUS PERSONAL SERVICES, NEC
J7		LODGING SERVICES
	7011	HOTELS, MOTELS, AND TOURIST COURTS
	7021	ROOMING AND BOARDING HOUSES
	7032	SPORTING AND RECREATIONAL CAMPS
	7033	RECREATION VEHICLE PARKS AND CAMPSITES
	7041	MEMBERSHIP-BASIS ORGANIZATION HOTELS
J8		BUSINESS SERVICES
	7322	ADJUSTMENT AND COLLECTION SERVICES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	7323	CREDIT REPORTING SERVICES
	7335	COMMERCIAL PHOTOGRAPHY
	7336	COMMERCIAL ART AND GRAPHIC DESIGN
	7342	DISINFECTING AND EXTERMINATING SERVICES
	7349	BUILDING MAINTENANCE SERVICES, NEC
	7352	MEDICAL EQUIPMENT RENTAL
	7353	HEAVY CONSTRUCTION EQUIPMENT RENTAL
	7359	EQUIPMENT RENTAL AND LEASING, NEC (EXC. DP)
	7361	EMPLOYMENT AGENCIES
	7363	HELP SUPPLY SERVICES
	7381	DETECTIVE AND ARMORED CAR SERVICES
	7382	SECURITY SYSTEMS SERVICES
	7389	BUSINESS SERVICES, NEC
	8731	COMMERCIAL PHYSICAL RESEARCH
	8734	TESTING LABORATORIES
	8744	FACILITIES SUPPORT SERVICES (EXC. COMPUTER)
J9		RESIDENTIAL
	8361	RESIDENTIAL CARE
	8811	PRIVATE HOUSEHOLDS
K1		NEWSPAPER PUBLISHING
	2711	NEWSPAPERS, PUBLISHING AND PRINTING
K2		MAGAZINE/PERIODICAL PUBLISHING
	2721	PERIODICALS, PUBLISHING AND PRINTING
K3		BOOK PUBLISHING
	2731	BOOK PUBLISHING
K4		MISCELLANEOUS PUBLISHING
	274A	ELECTRONIC DATA BASE PUBLISHING
	2741	MISCELLANEOUS PUBLISHING
	7383	NEWS SYNDICATES
	873K	COMMERCIAL PHYSICAL RESEARCH, MEDIA
	8999	SERVICES, NEC
K5		COMMERCIAL PRINTING
	2732	BOOK PRINTING
	2752	COMMERCIAL PRINTING, LITHOGRAPHIC
	2754	COMMERCIAL PRINTING, GRAVURE
	2759	COMMERCIAL PRINTING, NEC
	2761	MANIFOLD BUSINESS FORMS
	2771	GREETING CARDS
	2782	BLANKBOOKS AND LOOSELEAF BINDERS
	2789	BOOKBINDING AND RELATED WORK
	2791	TYPESETTING
	2796	PLATEMAKING SERVICES
	7334	PHOTOCOPYING AND DUPLICATING SERVICES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	7338	SECRETARIAL AND COURT REPORTING
	7384	PHOTOFINISHING LABORATORIES
K6		ADVERTISING/MARKETING
	596A	RECORD AND TAPE CLUBS
	7311	ADVERTISING AGENCIES
	7312	OUTDOOR ADVERTISING SERVICES
	7313	RADIO, TV, PUBLISHER REPRESENTATIVES
	7319	ADVERTISING, NEC
	7331	DIRECT MAIL ADVERTISING SERVICES
	8732	COMMERCIAL NONPHYSICAL RESEARCH
K7		BROADCASTING
	4832	RADIO BROADCASTING STATIONS
	4833	TELEVISION BROADCASTING STATIONS
	484A	CABLE NETWORK PROGRAMMING
K8		ASSOCIATIONS AND CHURCHES
	8322	INDIVIDUAL AND FAMILY SERVICES
	8351	CHILD DAY CARE SERVICES
	8399	SOCIAL SERVICES, NEC
	8611	BUSINESS ASSOCIATIONS
	8621	PROFESSIONAL ORGANIZATIONS
	8631	LABOR ORGANIZATIONS
	8641	CIVIC AND SOCIAL ASSOCIATIONS
	8651	POLITICAL ORGANIZATIONS
	8661	RELIGIOUS ORGANIZATIONS
	8699	MEMBERSHIP ORGANIZATIONS, NEC
K9		ENTERTAINMENT AND LEISURE
	7812	MOTION PICTURE AND VIDEO PRODUCTION
	7819	MOTION PICTURE SERVICES
	7822	MOTION PICTURE AND TAPE DISTRIBUTION
	7829	MOTION PICTURE DISTRIBUTION SERVICES
	7832	MOTION PICTURE THEATERS, EXCEPT DRIVE-INS
	7833	DRIVE-IN MOTION PICTURE THEATERS
	7841	VIDEO TAPE RENTAL
	7911	DANCE HALLS, STUDIOS, SCHOOLS
	7922	THEATRICAL PRODUCERS AND MISC. SERVICES
	7929	ENTERTAINERS AND ENTERTAINMENT GROUPS
	7933	BOWLING CENTERS
	7941	SPORTS CLUBS, MANAGERS, PROMOTERS, ARENAS
	7948	RACING, INCLUDING TRACK OPERATION
	7991	PHYSICAL FITNESS FACILITIES
	7992	PUBLIC GOLF COURSES
	7993	COIN-OPERATED AMUSEMENT DEVICES
	7996	AMUSEMENT PARKS
	7997	MEMBERSHIP SPORTS AND RECREATION CLUBS
	7999	AMUSEMENT AND RECREATION, NEC

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
MA		AEROSPACE
	3721	AIRCRAFT
	3724	AIRCRAFT ENGINES AND ENGINE PARTS
	3728	AIRCRAFT PARTS AND EQUIPMENT, NEC
	3731	SHIP BUILDING AND REPAIRNG
	3761	GUIDED MISSILES AND SPACE VEHICLES
	3764	SPACE PROPULSION UNITS AND PARTS
	3769	SPACE VEHICLE EQUIPMENT, NEC
M1		CONSTRUCTION
	1521	SINGLE FAMILY HOUSING CONSTRUCTION
	1522	RESIDENTIAL CONSTRUCTION, NEC
	1531	OPERATIVE BUILDERS
	1541	INDUSTRIAL BUILDINGS AND WAREHOUSES
	1542	NONRESIDENTIAL CONSTRUCTION, NEC
	1611	HIGHWAY AND STREET CONSTRUCTION
	1622	BRIDGE, TUNNEL, AND ELEVATED HIGHWAY
	1623	WATER, SEWER AND UTILITY LINES
	1629	HEAVY CONSTRUCTION, NEC
	1711	PLUMBING, HEATING, AIR CONDITIONING
	1721	PAINTING, PAPER HANGING, AND DECORATING
	1731	ELECTRICAL WORK
	1741	MASONRY AND OTHER STONEWORK
	1742	PLASTERING, DRYWALL, AND INSULATION
	1743	TERRAZZO, TILE, MARBLE, AND MOSAIC WORK
	1751	CARPENTRY WORK
	1752	FLOOR LAYING AND FLOORWORK, NEC
	1761	ROOFING, SIDING, AND SHEET METAL WORK
	1771	CONCRETE WORK
	1781	WATER WELL DRILLING
	1791	STRUCTURAL STEEL ERECTION
	1793	GLASS AND GLAZING WORK
	1794	EXCAVATION WORK
	1795	WRECKING AND DEMOLITION WORK
	1796	INSTALLING BUILDING EQUIPMENT, NEC
	1799	SPECIAL TRADE CONTRACTORS, NEC
	651A	FACILITIES MANAGEMENT - REAL ESTATE
	6512	OPERATORS OF NONRESIDENTIAL BUILDINGS
	6513	OPERATORS OF APARTMENT BUILDINGS
	6514	DWELLING OPERATORS, EXC. APARTMENTS
	6515	MOBILE HOME SITE OPERATORS
	6519	LESSORS OF REAL PROPERTY, NEC
	6552	SUBDIVIDERS AND DEVELOPERS, NEC
	8711	ENGINEERING SERVICES
	8712	ARCHITECTURAL SERVICES
	8713	SURVEYING SERVICES
M2		MOTOR VEHICLE & OTHER TRANSPORTATION EQUIP.
	2451	MOBILE HOMES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	3465	AUTOMOTIVE STAMPINGS
	3511	TURBINES AND TURBINE GENERATOR SETS
	3519	INTERNAL COMBUSTION ENGINES, NEC
	3523	FARM MACHINERY AND EQUIPMENT
	3524	LAWN AND GARDEN EQUIPMENT
	3531	CONSTRUCTION MACHINERY AND EQUIPMENT
	3537	INDUSTRIAL TRUCKS AND TRACTORS
	3592	CARBURETORS, PISTONS, RINGS, VALVES
	3711	MOTOR VEHICLES AND PASSENGER CAR BODIES
	3713	TRUCK AND BUS BODIES
	3714	MOTOR VEHICLE PARTS AND ACCESSORIES
	3715	TRUCK TRAILERS
	3716	MOTOR HOMES
	3732	BOAT BUILDING AND REPAIRING
	3743	RAILROAD EQUIPMENT
	3751	MOTORCYCLES, BICYCLES, AND PARTS
	3792	TRAVEL TRAILERS AND CAMPERS
	3795	TANKS AND TANK COMPONENTS
	3799	TRANSPORTATION EQUIPMENT, NEC
M3		ELECTRICAL MACHINERY
	3568	POWER TRANSMISSION EQUIPMENT, NEC
	357L	DP MANUFACTURERS INTERNAL DP USE
	3571	ELECTRONIC COMPUTERS
	3572	COMPUTER STORAGE DEVICES
	3575	COMPUTER TERMINALS
	3577	COMPUTER PERIPHERAL EQUIPMENT, NEC
	3578	CALCULATING AND ACCOUNTING EQUIPMENT
	3579	OFFICE MACHINES, NEC
	3596	SCALES AND BALANCES, EXC. LABORATORY
	3612	TRANSFORMERS, EXCEPT ELECTRONIC
	3613	SWITCHGEAR AND SWITCHBOARD APPARATUS
	3621	MOTORS AND GENERATORS
	3624	CARBON AND GRAPHITE PRODUCTS
	3625	RELAYS AND INDUSTRIAL CONTROLS
	3629	ELECTRICAL INDUSTRIAL APPARATUS, NEC
	3631	HOUSEHOLD COOKING EQUIPMENT
	3632	HOUSEHOLD REFRIGERATORS AND FREEZERS
	3633	HOUSEHOLD LAUNDRY EQUIPMENT
	3634	ELECTRIC HOUSEWARES AND FANS
	3635	HOUSEHOLD VACUUM CLEANERS
	3639	HOUSEHOLD APPLIANCES, NEC
	3641	ELECTRIC LAMPS
	3643	CURRENT-CARRYING WIRING DEVICES
	3644	NONCURRENT-CARRYING WIRING DEVICES
	3645	RESIDENTIAL LIGHTING FIXTURES
	3646	COMMERCIAL LIGHTING FIXTURES
	3647	VEHICULAR LIGHTING EQUIPMENT
	3648	LIGHTING EQUIPMENT, NEC

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	3651	HOUSEHOLD AUDIO AND VIDEO EQUIPMENT
	3652	PRERECORDED RECORDS AND TAPES
	3661	TELEPHONE AND TELEGRAPH APPARATUS
	3663	RADIO AND TV COMMUNICATIONS EQUIPMENT
	3669	COMMUNICATIONS EQUIPMENT, NEC
	3671	ELECTRON TUBES
	3672	PRINTED CIRCUIT BOARDS
	3674	SEMICONDUCTORS AND RELATED DEVICES
	3675	ELECTRONIC CAPACITORS
	3676	ELECTRONIC RESISTORS
	3677	ELECTRONIC COILS AND TRANSFORMERS
	3678	ELECTRONIC CONNECTORS
	3679	ELECTRONIC COMPONENTS, NEC
	3691	STORAGE BATTERIES
	3692	PRIMARY BATTERIES, DRY AND WET
	3694	ENGINE ELECTRICAL EQUIPMENT
	3695	MAGNETIC AND OPTICAL RECORDING MEDIA
	3699	ELECTRICAL EQUIPMENT AND SUPPLIES, NEC
	3812	SEARCH AND NAVIGATION EQUIPMENT
	3821	LABORATORY APPARATUS AND FURNITURE
	3822	ENVIRONMENTAL CONTROLS
	3823	PROCESS CONTROL INSTRUMENTS
	3824	FLUID METERS AND COUNTING DEVICES
	3825	INSTRUMENTS TO MEASURE ELECTRICTY
	3826	ANALYTICAL INSTRUMENTS
	3827	OPTICAL INSTRUMENTS AND LENSES
	3829	MEASURING AND CONTROLLING DEVICES, NEC
	3841	SURGICAL AND MEDICAL INSTRUMENTS
	3842	SURGICAL APPLIANCES AND SUPPLIES
	3843	DENTAL EQUIPMENT AND SUPPLIES
	3844	X-RAY APPARATUS AND TUBES
	3845	ELECTROMEDICAL EQUIPMENT
	3851	OPHTHALMIC GOODS
	3861	PHOTOGRAPHIC EQUIPMENT AND SUPPLIES
	3873	WATCHES, CLOCKS, WATCHCASES AND PARTS
M5		FABRICATED PRODUCTS
	2511	WOOD HOUSEHOLD FURNITURE
	2512	UPHOLSTERED HOUSEHOLD FURNITURE
	2514	METAL HOUSEHOLD FURNITURE
	2515	MATTRESSES AND BEDSPRINGS
	2517	WOOD TV AND RADIO CABINETS
	2519	HOUSEHOLD FURNITURE, NEC
	2521	WOOD OFFICE FURNITURE
	2522	OFFICE FURNITURE, EXCEPT WOOD
	2531	PUBLIC BUILDING AND RELATED FURNITURE
	2541	WOOD PARTITIONS AND FIXTURES
	2542	PARTITIONS AND FIXTURES, EXCEPT WOOD
	2591	DRAPERY HARDWARE, BLINDS, SHADES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	2599	FURNITURE AND FIXTURES, NEC
	3411	METAL CANS
	3412	METAL BARRELS, DRUMS, AND PAILS
	3421	CUTLERY
	3423	HAND AND EDGE TOOLS, NEC
	3425	HANDSAWS AND SAW BLADES
	3429	HARDWARE, NEC
	3431	METAL SANITARY WARE
	3432	PLUMBING FIXTURE FITTINGS AND TRIM
	3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
	3441	FABRICATED STRUCTURAL METAL
	3442	METAL DOORS, SASH, AND TRIM
	3443	FABRICATED PLATE WORK (BOILER SHOPS)
	3444	SHEET METAL WORK
	3446	ARCHITECTURAL METAL WORK
	3448	PREFABRICATED METAL BUILDINGS
	3449	MISCELLANEOUS METAL WORK
	3451	SCREW MACHINE PRODUCTS
	3452	BOLTS, NUTS, SCREWS, RIVETS AND WASHERS
	3466	CROWNS AND CLOSURES
	3469	METAL STAMPINGS, NEC
	3471	PLATING AND POLISHING
	3479	METAL COATING AND ALLIED SERVICES
	3482	SMALL ARMS AMMUNITION
	3483	AMMUNITION, EXC. SMALL ARMS, NEC
	3484	SMALL ARMS
	3489	ORDNANCE AND ACCESSORIES, NEC
	3491	INDUSTRIAL VALVES
	3492	FLUID POWER VALVES AND HOSE FITTINGS
	3493	STEEL SPRINGS, EXCEPT WIRE
	3494	VALVES AND PIPE FITTINGS, NEC
	3495	WIRE SPRINGS
	3496	MISCELLANEOUS FABRICATED WIRE PRODUCTS
	3497	METAL FOIL AND LEAF
	3498	FABRICATED PIPE AND FITTINGS
	3499	FABRICATED METAL PRODUCTS, NEC
	3532	MINING MACHINERY
	3533	OIL AND GAS FIELD MACHINERY
	3534	ELEVATORS AND MOVING STAIRWAYS
	3535	CONVEYORS AND CONVEYING EQUIPMENT
	3536	HOISTS, CRANES, AND MONORAIL
	3541	MACHINE TOOLS, METAL CUTTING TYPES
	3542	MACHINE TOOLS, METAL FORMING TYPES
	3543	INDUSTRIAL PATTERNS
	3544	SPECIAL DIES, TOOLS, JIGS & FIXTURES
	3545	MACHINE TOOL ACCESSORIES
	3546	POWER DRIVEN HANDTOOLS
	3547	ROLLING MILL MACHINERY
	3548	WELDING APPARATUS

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	3549	METALWORKING MACHINERY, NEC
	3552	TEXTILE MACHINERY
	3553	WOODWORKING MACHINERY
	3554	PAPER INDUSTRIES MACHINERY
	3555	PRINTING TRADES MACHINERY
	3556	FOOD PRODUCTS MACHINERY
	3559	SPECIAL INDUSTRY MACHINERY, NEC
	3561	PUMPS AND PUMPING EQUIPMENT
	3562	BALL AND ROLLER BEARINGS
	3563	AIR AND GAS COMPRESSORS
	3564	BLOWERS AND FANS
	3565	PACKAGING MACHINERY
	3566	SPEED CHANGERS, DRIVES AND GEARS
	3567	INDUSTRIAL FURNACES AND OVENS
	3569	GENERAL INDUSTRIAL MACHINERY, NEC
	3581	AUTOMATIC VENDING MACHINES
	3582	COMMERCIAL LAUNDRY EQUIPMENT
	3585	REFRIGERATION AND HEATING EQUIPMENT
	3586	MEASURING AND DISPENSING PUMPS
	3589	SERVICE INDUSTRY MACHINES, NEC
	3593	FLUID POWER CYLINDERS AND ACTUATORS
	3594	FLUID POWER PUMPS AND MOTORS
	3599	INDUSTRIAL MACHINERY, NEC
	3911	JEWELRY, PRECIOUS METAL
	3914	SILVERWARE AND PLATED WARE
	3915	JEWELERS' MATERIALS AND LAPIDARY WORK
	3931	MUSICAL INSTRUMENTS
	3942	DOLLS AND STUFFED TOYS
	3944	GAMES, TOYS AND CHILDREN'S VEHICLES
	3949	SPORTING AND ATHLETIC GOODS, NEC
	3951	PENS AND MECHANICAL PENCILS
	3952	LEAD PENCILS AND ART GOODS
	3953	MARKING DEVICES
	3955	CARBON PAPER AND INKED RIBBONS
	3961	COSTUME JEWELRY
	3965	FASTENERS, BUTTONS, NEEDLES AND PINS
	3991	BROOMS AND BRUSHES
	3993	SIGNS AND ADVERTISING SPECIALITIES
	3995	BURIAL CASKETS
	3996	HARD SURFACE FLOOR COVERINGS, NEC
	3999	MANUFACTURING INDUSTRIES, NEC
N1		LIFE INSURANCE CARRIERS
	6311	INSURANCE CARRIERS - LIFE
	6321	INSURANCE CARRIERS - HEALTH AND ACCIDENT
N2		PROPERTY AND LIABILITY INSURANCE CARRIERS
	6331	INSURANCE CARRIERS - PROPERTY/LIABILITY
	6351	SURETY COMPANIES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	6361	TITLE INSURANCE
	6541	TITLE ABSTRACT OFFICES
N3		MEDICAL INSURANCE PLANS
	6324	HOSPITAL AND MEDICAL SERVICE PLANS
N4		INSURANCE AGENTS AND BROKERS
	6411	INSURANCE AGENTS, BROKERS, AND SERVICE
N5		OTHER INSURANCE
	6371	PENSION, HEALTH AND WELFARE FUNDS
	6399	INSURANCE CARRIERS, NEC
	873N	COMMERCIAL PHYSICAL RESEARCH, INSURANCE
P1		PRIMARY METALS
	3312	BLAST FURNACES AND STEEL MILLS
	3313	ELECTROMETALLURGICAL PRODUCTS
	3315	STEEL WIRE AND RELATED PRODUCTS
	3316	COLD FINISHING OF STEEL SHAPES
	3317	STEEL PIPE AND TUBES
	3321	GRAY AND DUCTILE IRON FOUNDRIES
	3322	MALLEABLE IRON FOUNDRIES
	3324	STEEL INVESTMENT FOUNDRIES
	3325	STEEL FOUNDRIES, NEC
	3331	PRIMARY COPPER
	3334	PRIMARY ALUMINUM
	3339	PRIMARY NONFERROUS METALS, NEC
	3341	SECONDARY NONFERROUS METALS
	3351	COPPER ROLLING AND DRAWING
	3353	ALUMINUM SHEET, PLATE AND FOIL
	3354	ALUMINUM EXTRUDED PRODUCTS
	3355	ALUMINUM ROLLING AND DRAWING, NEC
	3356	NONFERROUS ROLLING AND DRAWING, NEC
	3357	NONFERROUS WIREDRAWING AND INSULATING
	3363	ALUMINUM DIE-CASTINGS
	3364	NONFERROUS DIE-CASTINGS, EXC. ALUMINUM
	3365	ALUMINUM FOUNDRIES
	3366	COPPER FOUNDRIES
	3369	NONFERROUS FOUNDRIES, NEC
	3398	METAL HEAT TREATING
	3399	PRIMARY METAL PRODUCTS, NEC
	3462	IRON AND STEEL FORGINGS
	3463	NONFERROUS FORGINGS
P2		FOREST PRODUCTS
	0811	TIMBER TRACTS
	0831	FOREST PRODUCTS
	0851	FORESTRY SERVICES
	2411	LOGGING

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	2421	SAWMILLS AND PLANING MILLS, GENERAL
	2426	HARDWOOD DIMENSION AND FLOORING MILLS
	2429	SPECIAL PRODUCT SAWMILLS, NEC
	2431	MILLWORK
	2434	WOOD KITCHEN CABINETS
	2435	HARDWOOD VENEER AND PLYWOOD
	2436	SOFTWOOD VENEER AND PLYWOOD
	2439	STRUCTURAL WOOD MEMBERS, NEC
	2441	NAILED WOODEN BOXES AND SHOOK
	2448	WOOD PALLETS AND SKIDS
	2449	WOOD CONTAINERS, NEC
	2452	PREFABRICATED WOOD BUILDINGS
	2491	WOOD PRESERVING
	2493	RECONSTITUTED WOOD PRODUCTS
	2499	WOOD PRODUCTS, NEC
	2611	PULP MILLS
	2621	PAPER MILLS
	2631	PAPERBOARD MILLS
	2652	SETUP PAPERBOARD BOXES
	2653	CORRUGATED AND SOLID FIBER BOXES
	2655	FIBER CANS, DRUMS, AND SIMILIAR PRODUCTS
	2656	SANITARY FOOD CONTAINERS
	2657	FOLDING PAPERBOARD BOXES
	2671	PAPER COATED AND LAMINATED, PACKAGING
	2672	PAPER COATED AND LAMINATED, NEC
	2673	BAGS: PLASTICS, LAMINATED AND COATED
	2674	BAGS: UNCOATED PAPER AND MULTIWALL
	2675	DIE-CUT PAPER AND BOARD
	2676	SANITARY PAPER PRODUCTS
	2677	ENVELOPES
	2678	STATIONARY PRODUCTS
	2679	CONVERTED PAPER PRODUCTS, NEC
P3		RUBBER, GLASS AND MINERAL PRODUCTS
	3011	TIRES AND INNER TUBES
	3021	RUBBER AND PLASTICS FOOTWEAR
	3052	RUBBER AND PLASTICS HOSE AND BELTING
	3053	GASKETS, PACKING AND SEALING DEVICES
	3061	MECHANICAL RUBBER GOODS
	3069	FABRICATED RUBBER PRODUCTS, NEC
	3081	UNSUPPORTED PLASTICS FILM AND SHEET
	3082	UNSUPPORTED PLASTICS PROFILE SHAPES
	3083	LAMINATED PLASTICS PLATE AND SHEET
	3084	PLASTICS PIPE
	3085	PLASTICS BOTTLES
	3086	PLASTICS FOAM PRODUCTS
	3087	CUSTOM COMPOUND PURCHASED RESINS
	3088	PLASTICS PLUMBING FIXTURES
	3089	PLASTICS PRODUCTS, NEC

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	3211	FLAT GLASS
	3221	GLASS CONTAINERS
	3229	PRESSED AND BLOWN GLASS, NEC
	3231	PRODUCTS OF PURCHASED GLASS
	3241	CEMENT, HYDRAULIC
	3251	BRICK AND STRUCTURAL CLAY TILE
	3253	CERAMIC WALL AND FLOOR TILE
	3255	CLAY REFRACTORIES
	3259	STRUCTURAL CLAY PRODUCTS, NEC
	3261	VITREOUS PLUMBING FIXTURES
	3262	VITREOUS CHINA TABLE AND KITCHENWARE
	3263	SEMIVITREOUS TABLE AND KITCHENWARE
	3264	PORCELAIN ELECTRICAL SUPPLIES
	3269	POTTERY PRODUCTS, NEC
	3271	CONCRETE BRICK AND BLOCK
	3272	CONCRETE PRODUCTS, NEC
	3273	READY-MIXED CONCRETE
	3274	LIME
	3275	GYPSUM PRODUCTS
	3281	CUT STONE AND STONE PRODUCTS
	3291	ABRASIVE PRODUCTS
	3292	ASBESTOS PRODUCTS
	3295	MINERALS, GROUND OR TREATED
	3296	MINERAL WOOL
	3297	NONCLAY REFRACTORIES
	3299	NONMETALLIC MINERAL PRODUCTS, NEC
P4		TEXTILES
	2211	BROADWOVEN FABRIC MILLS, COTTON
	2221	BROADWOVEN FABRIC MILLS, MANMADE
	2231	BROADWOVEN FABRIC MILLS, WOOL
	2241	NARROW FABRIC MILLS
	2257	WEFT KNIT FABRIC MILLS
	2258	LACE AND WARP KNIT FABRIC MILLS
	2261	FINISHING PLANTS, COTTON
	2262	FINISHING PLANTS, MANMADE
	2269	FINISHING PLANTS, NEC
	2273	CARPETS AND RUGS
	2281	YARN SPINNING MILLS
	2282	THROWING AND WINDING MILLS
	2284	THREAD MILLS
	2295	COATED FABRICS, NOT RUBBERIZED
	2296	TIRE CORD AND FABRICS
	2297	NONWOVEN FABRICS
	2298	CORDAGE AND TWINE
	2299	TEXTILE GOODS, NEC
P5		PHARMACEUTICALS
	2833	MEDICINALS AND BOTANICALS

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	2834	PHARMACEUTICAL PREPARATIONS
	2835	DIAGNOSTIC SUBSTANCES
	2836	BIOLOGICAL PRODUCTS, EXC. DIAGNOSTIC
P6		CONSUMER GOODS AND AGRIBUSINESS
	0111	WHEAT
	0112	RICE
	0115	CORN
	0116	SOYBEANS
	0119	CASH GRAINS, NEC
	0131	COTTON
	0132	TOBACCO
	0133	SUGAR CANE AND SUGAR BEETS
	0134	IRISH POTATOES
	0139	FIELD CROPS, EXCEPT CASH GRAINS, NEC
	0161	VEGETABLES AND MELONS
	0171	BERRY CROPS
	0172	GRAPES
	0173	TREE NUTS
	0174	CITRUS FRUITS
	0175	DECIDUOUS TREE FRUITS
	0179	FRUITS AND TREE NUTS, NEC
	0181	ORNAMENTAL NURSERY PRODUCTS
	0182	FOOD CROPS GROWN UNDER COVER
	0191	GENERAL FARMS, PRIMARILY CROP
	0211	BEEF CATTLE FEEDLOTS
	0212	BEEF CATTLE, EXCEPT FEEDLOTS
	0213	HOGS
	0214	SHEEP AND GOATS
	0219	GENERAL LIVESTOCK, NEC
	0241	DAIRY FARMS
	0251	BROILER, FRYER, AND ROASTER CHICKENS
	0252	CHICKEN EGGS
	0253	TURKEYS AND TURKEY EGGS
	0254	POULTRY HATCHERIES
	0259	POULTRY AND EGGS, NEC
	0271	FUR-BEARING ANIMALS AND RABBITS
	0272	HORSES AND OTHER EQUINES
	0273	ANIMAL AQUACULTURE
	0279	ANIMAL SPECIALTIES, NEC
	0291	GENERAL FARMS, PRIMARILY ANIMAL
	0711	SOIL PREPARATION SERVICES
	0721	CROP PLANTING AND PROTECTING
	0722	CROP HARVESTING
	0723	CROP PREPARATION SERVICES FOR MARKET
	0724	COTTON GINNING
	0741	VETERINARY SERVICES FOR LIVESTOCK
	0742	VETERINARY SERVICES, SPECIALITIES
	0751	LIVESTOCK SERVICES, EXCEPT VETERINARY

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	0752	ANIMAL SPECIALTY SERVICES
	0761	FARM LABOR CONTRACTORS
	0762	FARM MANAGEMENT SERVICES
	0781	LANDSCAPE COUNSELING AND PLANNING
	0782	LAWN AND GARDEN SERVICES
	0783	ORNAMENTAL SHRUB AND TREE SERVICES
	0912	FINFISH
	0913	SHELLFISH
	0919	MISCELLANEOUS MARINE PRODUCTS
	0921	FISH HATCHERIES AND PRESERVES
	0971	HUNTING, TRAPPING, GAME PROPAGATION
	2011	MEAT PACKING PLANTS
	2013	SAUSAGES AND OTHER PREPARED MEATS
	2015	POULTRY SLAUGHTERING AND PROCESSING
	2021	CREAMERY BUTTER
	2022	CHEESE, NATURAL AND PROCESSED
	2023	DRY, CONDENSED, EVAPORATED PRODUCTS
	2024	ICE CREAM AND FROZEN DESSERTS
	2026	FLUID MILK
	2032	CANNED SPECIALTIES
	2033	CANNED FRUITS AND VEGETABLES
	2034	DEHYDRATED FRUITS, VEGETABLES, SOUPS
	2035	PICKLES, SAUCES, AND SALAD DRESSINGS
	2037	FROZEN FRUITS AND VEGETABLES
	2038	FROZEN SPECIALTIES, NEC
	2041	FLOUR AND OTHER GRAIN MILL PRODUCTS
	2043	CEREAL BREAKFAST FOODS
	2044	RICE MILLING
	2045	PREPARED FLOUR MIXES AND DOUGHS
	2046	WET CORN MILLING
	2047	PET FOOD
	2048	PREPARED FEEDS, NEC
	2051	BREAD, CAKE, AND RELATED PRODUCTS
	2052	COOKIES AND CRACKERS
	2053	FROZEN BAKERY PRODUCTS, EXC. BREAD
	2061	RAW CANE SUGAR
	2062	CANE SUGAR REFINING
	2063	BEET SUGAR
	2064	CANDY AND OTHER CONFECTIONARY PRODUCTS
	2066	CHOCOLATE AND COCOA PRODUCTS
	2067	CHEWING GUM
	2068	SALTED AND ROASTED NUTS AND SEEDS
	2074	COTTONSEED OIL MILLS
	2075	SOYBEAN OIL MILLS
	2076	VEGETABLE OIL MILLS, NEC
	2077	ANIMAL AND MARINE FATS AND OILS
	2079	EDIBLE FATS AND OILS, NEC
	2082	MALT BEVERAGES
	2083	MALT

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	2084	WINES, BRANDY, AND BRANDY SPIRITS
	2085	DISTILLED AND BLENDED LIQUOR
	2086	BOTTLED AND CANNED SOFT DRINKS
	2087	FLAVORING EXTRACTS AND SYRUPS, NEC
	2091	CANNED AND CURED FISH AND SEAFOOD
	2092	FRESH OR FROZEN PREPARED FISH
	2095	ROASTED COFFEE
	2096	POTATO CHIPS, CORN CHIPS AND SIMILAR SNACKS
	2097	MANUFACTURED ICE
	2098	MACARONI AND SPAGHETTI
	2099	FOOD PREPARATIONS, NEC
	2111	CIGARETTES
	2121	CIGARS
	2131	CHEWING AND SMOKING TOBACCO
	2141	TOBACCO STEMMING AND REDRYING
	2841	SOAP AND OTHER DETERGENTS
	2842	POLISHES AND SANITATION GOODS
	2843	SURFACE ACTIVE AGENTS
	2844	TOILET PREPARATIONS
P7		PETROLEUM
	1311	CRUDE PETROLEUM AND NATURAL GAS
	1321	NATURAL GAS LIQUIDS
	1381	DRILLING OIL AND GAS WELLS
	1382	OIL AND GAS EXPLORATION SERVICES
	1389	OIL AND GAS FIELD SERVICES, NEC
	2911	PETROLEUM REFINING
	2951	ASPHALT PAVING MIXTURES AND BLOCKS
	2952	ASPHALT FELTS AND COATINGS
	2992	LUBRICATING OILS AND GREASES
	2999	PRODUCTS OF PETROLEUM AND COAL, NEC
	4612	CRUDE PETROLEUM PIPELINES
	4613	REFINED PETROLEUM PIPELINES
	4619	PIPELINES, NEC
	4922	NATURAL GAS TRANSMISSION
	5171	PETROLEUM BULK STATIONS AND TERMINALS
	5172	PETROLEUM PRODUCTS, NEC
	5541	GASOLINE SERVICE STATIONS
P8		CHEMICALS
	2812	ALKALIES AND CHLORINE
	2813	INDUSTRIAL GASES
	2816	INORGANIC PIGMENTS
	2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
	2821	PLASTICS MATERIALS AND RESINS
	2822	SYNTHETIC RUBBER
	2823	CELLULOSIC MANMADE FIBERS
	2824	ORGANIC FIBERS, NONCELLULOSIC
	2851	PAINTS AND ALLIED PRODUCTS

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	2861	GUM AND WOOD CHEMICALS
	2865	CYCLIC CRUDES AND INTERMEDIATES
	2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
	2873	NITROGENOUS FERTILIZERS
	2874	PHOSPHATIC FERTILIZERS
	2875	FERTILIZERS, MIXING ONLY
	2879	AGRICULTURAL CHEMICALS, NEC
	2891	ADHESIVES AND SEALANTS
	2892	EXPLOSIVES
	2893	PRINTING INK
	2895	CARBON BLACK
	2899	CHEMICAL PREPARATIONS, NEC
P9		MINING
	1011	IRON ORES
	1021	COPPER ORES
	1031	LEAD AND ZINC ORES
	1041	GOLD ORES
	1044	SILVER ORES
	1061	FERROALLOY ORES, EXCEPT VANADIUM
	1081	METAL MINING SERVICES
	1094	URANIUM - RADIUM - VANADIUM ORES
	1099	METALLIC ORES, NEC
	1221	BITUMINOUS COAL AND LIGNITE - SURFACE
	1222	BITUMINOUS COAL - UNDERGROUND
	1231	ANTHRACITE MINING
	1241	COAL MINING SERVICES
	1411	DIMENSION STONE
	1422	CRUSHED AND BROKEN LIMESTONE
	1423	CRUSHED AND BROKEN GRANITE
	1429	CRUSHED AND BROKEN STONE, NEC
	1442	CONSTRUCTION SAND AND GRAVEL
	1446	INDUSTRIAL SAND
	1455	KAOLIN AND BALL CLAY
	1459	CLAY AND RELATED MATERIALS, NEC
	1474	POTASH, SODA, AND BORATE MINERALS
	1475	PHOSPHATE ROCK
	1479	CHEMICAL AND FERTILIZER MINING, NEC
	1481	NONMETALLIC MINERALS SERVICES
	1499	MISCELLANEOUS NONMETALLIC MINERALS
R1		ELEMENTARY AND SECONDARY SCHOOLS
	821A	ELEM/SEC SCHOOLS - PRIVATE AND PAROCHIAL
	8211	ELEMENTARY/SECONDARY SCHOOLS - PUBLIC
	942R	ELEMENTARY/SECONDARY SCHOOLS, STATE ENTERPRISE
	952R	ELEMENTARY/SECONDARY SCHOOLS, COUNTY ENTERPRISE
	962R	ELEMENTARY/SECONDARY SCHOOLS, CITY ENTERPRISE

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
R2		VOCATIONAL SCHOOLS - NON PROFIT
	821C	POST HIGH/VOC SCHOOLS - NON PROFIT
	942V	VOCATIONAL SCHOOLS, STATE ENTERPRISE
	952V	VOCATIONAL SCHOOLS, COUNTY ENTERPRISE
	962V	VOCATIONAL SCHOOLS, CITY ENTERPRISE
R3		CORRES., BUS., VOC. SCHOOLS-PROFIT MAKING
	8244	BUSINESS & SECRETATIAL SCHOOLS, EXCL- DP
	8249	VOCATIONAL SCHOOLS, NEC - PROFIT MAKING
	8331	JOB TRAINING AND RELEATED SERVICES
R4		REGIONAL SCHOOL CENTERS
	821B	ELEM/SEC SCHOOLS - REGIONAL CENTERS
R5		EDUCATIONAL - OTHER
	731R	PURCHASING AGENCIES, ELEM/SEC/VOC SCHOOLS
	942A	STATE BD OF EDUCATION (K-12 ONLY)
S1		BROKERS/DEALERS
	6211	SECURITY BROKERS AND DEALERS
	6221	COMMODITY CONTRACTS BROKERS AND DEALERS
S2		EXCHANGES
	623A	COMMODITY EXCHANGES
	6231	SECURITY EXCHANGES
	6282	INVESTMENT ADVICE
	6289	SECURITY AND COMMODITY SERVICES, NEC
S3		INVESTMENTS
	6722	MANAGEMENT INVESTMENT COS., OPEN-END
	6726	INVESTMENT OFFICES, NEC
	6732	EDUCATIONAL, RELIGIOUS, ETC. TRUSTS
	6733	TRUSTS, NEC
	6792	OIL ROYALTY TRADERS
	6794	PATENT OWNERS AND LESSORS
	6799	INVESTING INSTITUTIONS, NEC
TA		AUTO RENTAL SERVICES
	7514	PASSENGER CAR RENTAL
	7515	PASSENGER CAR LEASING
TB		TRAVEL AGENCIES/TOUR OPERATORS
	4724	TRAVEL AGENCIES
	4725	TOUR OPERATORS
	4729	PASSENGER TRANSPORTATION ARRANGEMENT, NEC
TC		TRUCK/TRAILER RENTALS
	7513	TRUCK RENTAL AND LEASING
	7519	UTILITY TRAILER AND RV RENTAL

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL CODE	SIC CODE	DESCRIPTION
TD		WATER TRANSPORTATION, PASSENGER
	4481	DEEP SEA PASSENGER TRANSPORTATION, EXC. FERRY
	4482	FERRIES
	4489	WATER PASSENGER TRANSPORTATION, NEC
	4493	MARINAS
TE		AIRLINES, FREIGHT
	451A	AIR FREIGHT TRANSPORTATION
	4513	AIR COURIER SERVICES
T1		OTHER TRANSPORTATION SERVICES
	4221	FARM PRODUCT WAREHOUSING AND STORAGE
	4222	REFRIGERATED WAREHOUSING AND STORAGE
	4225	GENERAL WAREHOUSING AND STORAGE
	4226	SPECIAL WAREHOUSING AND STORAGE, NEC
	4231	TRUCKING TERMINAL FACILITIES
	4731	FREIGHT TRANSPORTATION ARRANGEMENT
	4741	RENTAL OF RAILROAD CARS
	4783	PACKING AND CRATING
	4785	INSPECTION AND FIXED FACILITIES
	4789	TRANSPORTATION SERVICES, NEC
	873T	COMMERCIAL PHYSICAL RESEARCH, TRANSPORTATION
T2		MOTOR FREIGHT
	4212	LOCAL TRUCKING, WITHOUT STORAGE
	4213	TRUCKING, EXCEPT LOCAL
	4214	LOCAL TRUCKING, WITH STORAGE
	4215	COURIER SERVICES, EXCEPT BY AIR
T3		RAILROADS, FREIGHT
	4011	RAILROADS, LINE-HAUL OPERATING, FREIGHT
	4013	SWITCHING AND TERMINAL SERVICES, FREIGHT
T4		LOCAL & HIGHWAY PASSENGER TRANSPORTATION
	4119	LOCAL PASSENGER TRANSPORTATION, NEC
	4121	TAXICABS
	4131	INTERCITY AND RURAL BUS TRANSPORTATION
	4141	LOCAL BUS CHARTER SERVICE
	4142	BUS CHARTER SERVICE, EXCEPT LOCAL
	4151	SCHOOL BUSES
	4173	BUS TERMINAL AND SERVICE FACILITIES
T5		WATER TRANSPORTATION, FREIGHT
	4412	DEEP SEA FOREIGN TRANSPORTATION OF FREIGHT
	4424	DEEP SEA DOMESTIC TRANSPORTATION OF FREIGHT
	4432	FREIGHT TRANSPORTATION ON THE GREAT LAKES
	4449	WATER TRANSPORTATION OF FREIGHT, NEC
	4491	MARINE CARGO HANDLING
	4492	TOWING AND TUGBOAT SERVICE

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	4499	WATER TRANSPORTATION SERVICES, NEC
T6		TRANSIT & AUTO PARKING
	4111	LOCAL AND SUBURBAN TRANSIT
	7521	AUTOMOBILE PARKING
T7		AIRLINES, PASSENGER
	4512	PASSENGER AIR TRANSPORTATION, SCHEDULED
	4522	PASSENGER AIR TRANSPORTATION, NONSCHEDULED
	4581	AIRPORTS, FLYING FIELDS, & SVCS (EXC. MUNICIPAL)
T8		RAILROADS, PASSENGER
	401A	RAILROADS, LINE-HAUL OPERATING, PASSENGER
	401B	SWITCHING AND TERMINAL SERVICES, PASSENGER
U1		UTILITIES, GAS
	4923	GAS TRANSMISSION AND DISTRIBUTION
	4924	NATURAL GAS DISTRIBUTION
	4925	GAS PRODUCTION AND/OR DISTRIBUTION
	4932	GAS AND OTHER SERVICES COMBINED
U2		UTILITIES, ELECTRIC
	4911	ELECTRIC COMPANIES AND SYSTEMS
	4931	ELECTRIC AND OTHER SERVICES COMBINED
U3		UTILITIES, COMBINATION
	4939	COMBINATION UTILITIES, NEC
U4		OTHER UTILITIES
	4941	WATER SUPPLY
	4961	STEAM SUPPLY
	4971	IRRIGATION SYSTEMS
	873U	COMMERCIAL PHYSICAL RESEARCH, UTILITIES
U5		UTILITIES, GOVERNMENT
	491B	ELECTRIC COMPANIES AND SYSTEMS
	492C	GAS TRANSMISSION AND DISTRIBUTION
	492D	NATURAL GAS DISTRIBUTION
	492E	GAS PRODUCTION AND/OR DISTRIBUTION
	493A	ELECTRIC AND OTHER SERVICES COMBINED
	493B	GAS AND OTHER SERVICES COMBINED
	493G	COMBINATION COMPANIES & SYSTEMS, NEC
	494A	WATER SUPPLY
	495B	SEWERAGE SYSTEMS
	495C	REFUSE SYSTEMS
	495G	SANITARY SERVICES, NEC
U6		UTILITIES, WASTE
	4952	SEWERAGE SYSTEMS

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	4953	REFUSE SYSTEMS
	4959	SANITARY SERVICES, NEC
U7		RURAL ELECTRIC COOP.
	491A	RURAL ELECTRIC ASSOCIATIONS (CO-OPS)
W1		DP LEASING COMPANIES
	7377	COMPUTER RENTAL AND LEASING
W2		DP EQUIPMENT BROKERS/DEALERS
	737K	BROKERS
W3		DP MAINTENANCE COMPANIES
	7378	COMPUTER MAINTENANCE AND REPAIR
W4		CUSTOMER SPECULATIVE - SPLIT ENTERPRISE
	737S	SPECULATIVE CUSTOMERS
X2		DOMESTIC ORDERS - OVERSEAS DESTINATION
	9997	DOMESTIC ORDERS-OVERSEAS DESTINATION
YA		FOREIGN AFFAIRS/SPECIAL OPS
	9186	CMU SPECIAL
	9199	CIA
	9201	STATE DEPT.
	9234	AID/OTHER
YB		NASA
	9020	NASA SPACE SCIENCE
	9021	NASA RESEARCH
	9022	NASA MANNED SPACE
	9027	NASA GODDARD (WASH. D.C. ONLY)
	9056	NASA SPACE STATION
	9142	NASA HQ
YC		ENERGY/TVA/COMMERCE
	9007	NRC
	9015	COMMERCE
	9016	NOAA
	9018	EPA
	9023	ERDA/CONTR
	9026	TVA
	9028	ENERGY INFO. ADMIN.
	9031	OPM
	9032	INDP. AGY.
	9033	EDUCATION
	9053	CENSUS/PAT/NBS
	9244	DOE HQ-AD

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
YD		EXECUTIVE/LEGISLATIVE
	9210	EXEC GOVERNMENT
	9211	GENERAL ACCOUNTING OFFICE
	9213	LIBRARY CONGRESS
	9214	HOUSE OF REPRESENTATIVES
	9215	US SENATE
	9216	INTERNATIONAL
	9219	GOVERNMENT PRINTING OFFICE
YE		SBA/FTC
	9012	SBA/FTC
	9057	FCC/ICC
YF		RESTRICTED
	9042	RESTRICTED AFS
	9043	RESTRICTED SAM
	9065	RESTRICTED 1
	9240	RESTRICTED SPACE
YG		ARMY/AIR FORCE EXCHANGES (COMMISSIONABLE)
	9046	AAFES DOMESTIC
	9047	AAFES OVERSEAS
YH		INTERNATIONAL (COMMISSIONABLE)
	9217	FOREIGN GOVERNMENT EMBASSIES AND CONSULATES
YI		REGULATORY
	9003	TREASURY DEPT
	9004	IRS
	9006	SEC
	9009	NATIONAL SCIENCE FOUNDATION
	9010	FDIC
	9070	PENSIONS
	9231	BUREAU CUSTOMS
	9245	FED RESERVE BD
YJ		LABOR/GSA/SMITHSONIAN
	9002	VA ADMIN.
	9005	GSA
	9029	SMITHSONIAN / NAS / EEOC
	9040	LABOR
	9230	VA HOSPITALS
YK		NFM/FSD - COMPLEX SYS. ORG.
	901F	NFM/FSD - COMPLEX SYS. ORG.
	902F	NFM/FSD - COMPLEX SYS. ORG.
	903F	NFM/FSD - COMPLEX SYS. ORG.
	904F	NFM/FSD - COMPLEX SYS. ORG.
	905F	NFM/FSD - COMPLEX SYS. ORG.

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
Y1		ARMY
	9044	ARMY - RFP 28W ONLY
	9048	ARMY PENTAGON/LOCAL
	9055	ARMY - FORSCOM
	9060	ARMY AMC/COMMODITY CMD
	9061	ARMY AMC/LABCOM
	9062	ARMY AMC/DEPOTS
	9063	ARMY PANAMA
	9064	ARMY AMC/TECOM
	9066	ARMY - VIABLE 28W ONLY
	9067	ARMY PERSONNEL
	9068	ARMY FINANCE
	9069	ARMY MEDICAL
	9071	ARMY RFP 28W ONLY
	9072	EUROPE 5TH SIGNAL
	9073	PACIFIC 5TH SIGNAL
	9074	ARMY PACIFIC
	9075	ARMY EUROPE
	9077	ARMY MISC. COMMANDS
	9078	ARMY - TRADOC
	9079	ARMY MTMC
	9081	ARMY AMC/CORPS OF ENGINEERS
	9082	ARMY ISEC FT. BELVOIR
	9083	ARMY NATIONAL GUARD
	9084	ARMY RESERVE
	9221	BELL LABS
	9222	ARMY TAGO
	9223	ARMY AUDIT
	9224	ARMY JAG
	9225	ARMY TROOP SUPPORT
	9226	ARMY WEST POINT
	9227	ARMY HQ FT. HAUCHUCA
	9228	ARMY ISMA FT. MONMOUTH
	9229	ARMY 7TH SIGNAL FT. RICHIE
Y2		NAVY
	9049	ICP1
	9050	NAV TELECOMMU CMD
	9051	NAVY - RESTRICTED
	9076	SPAR
	9086	ICP2
	9090	NAV EDUC/TRAINING CMD
	9091	NAV PERSONNEL/FINANCE
	9092	NAV ELECTRONICS CMD
	9093	NAV LABS/R & D CTRS
	9094	NAV CONTRACTORS
	9095	NAV MEDICAL CMD
	9097	NAV CNO/OPERATING FORCES
	9098	NAV SEA SYS CMD

INPUT LIBRARY

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	9100	NAV FACILITY CMD
	9101	NAV DATA AUTOMATION CMD
	9102	NAV MILITARY SEALIFT CMD
	9103	NAV OCEANOGRAPHY CMD
	9104	NAV RESERVE CMD
	9105	NAV MATERIAL HQ
	9107	NAV SUPPLY SYS CMD
	9108	NAV AIR SYS CMD
	9111	NAV MAT. FIELD ACCOUNT
	9113	MARINE CORPS
Y3		AIR FORCE/JOINT DEFENSE
	9045	AF LESSER COMDS AND OVERSEAS
	9052	AF NON AP FND
	9099	SWPS PROJECT
	9114	AF CTRS-RES-GRD
	9116	AF CONTRACTOR - MIL SPACE
	9117	AF LOG CMD
	9118	AF EUR-PAC-ALAS
	9119	AF SYS. CMD.
	9120	AF TRAINING CMD
	9122	AF MISC.
	9123	AF COMM. CMD
	9124	AF INSP. & SAFETY
	9128	AF CONTRACTORS
	9129	AF AEROSPACE CORP
	9131	AF SYST. DEVEL. CORP
	9133	AF FSD SPACE
	9134	AF SAMSO GENERAL
	9136	AF SCF
	9137	AF SAMTEC
	9138	AF SAMSO WESTOVER
	9141	AF TEST RANGE
	9143	DCA-JT. DATA SYS. SUPT. AGENCY
	9144	DCA WORLD WIDE ON-LINE SYS.
	9145	DCA-DEF. COMM. OPER. SUPT. SYS
	9146	JCS - WISCUC
	9147	DOD-DEPENDENT SCHOOLS
	9148	DLA-DEPOTS
	9149	DLA-SUPPLY CTRS
	9150	DOD-DEF. COMM. ENGR. CTR
	9151	DLA-SVCS.CTRS
	9152	DLA-DCASRS
	9153	DOD-DEF. NUCLEAR AGENCY
	9154	DLA-OTHER
	9155	DOD-SECURITY AUDIT AGENCY
	9156	DOD-ADVNCD RSCH. PROG. AGENCY
	9157	DOD-DEF. AUDIT AGENCY
	9158	DOD-DEF. CONTRACT AUDIT AGENCY

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	9159	DOD COMMAND & CONTROL
	9160	DOD-OFF. SECR. DEF. FLD. AGENCY
	9161	DOD-UNIFORM SERV. UNIV. HOSP. SYS
	9165	JCS JOINT CMDS
	9233	AF AESC
	9238	AF COMMISSARY
	9239	AF MIL AIRL CMD
	9241	AIR FORCE PENTAGON (WASH. D.C. ONLY)
	9242	AF TAC
	9246	AF SAC
	9247	AF WEAPONS CONTR.
Y4		HEALTH
	9011	H&HS HRSA/ADAMHA
	9034	H&HS/SSA
	9035	H&HS/NIH
	9036	H&HS/ADMIN
	9037	H&HS/NAT. LIB. MED.
	9038	H&HS PCC INDIAN HEALTH/FDA
	9039	H&HS NIH/RJE
	9058	H&HS OASH
	9059	TERM. ACQUISITION PROJECT
Y5		FAA/TRANSPORTATION
	9000	FAA-LOCAL (WASH. D.C. ONLY)
	9001	FAA-NATIONAL
	9008	FAA - NATIONAL ADMIN.
	9014	DOT/HWY ADM/MARTME/ST. LAW
	9017	DOT
	9054	FAA - DRA
	9085	FAA - LOCAL ADMIN. (WASH. D.C. ONLY)
Y6		SECURITY/DEF INTELLIGENCE
	9080	DEF. INVESTIGATIVE UNITS
	9185	SECURITY-1
	9187	SECURITY-2
	9189	INTEL - ARMY
	9191	INTEL - NAVY
	9193	INTEL - AF
	9195	DIA
	9198	INTEL - OTHER
Y7		INTERIOR/AGRICULTURE
	9013	FARM CREDIT ADMIN.
	9019	AGRICULTURE
	9024	INTERIOR DEPT
	9025	GEOLOGICAL SURVEY
	9030	FED. CHART. INDIAN TRIBES
	9041	HOUSE URBAN DEV.

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	9243	AG. FT COLLINS
Y8		USPS
	9106	USPS FLD/OP SPT
	9202	USPS - NORTHEAST
	9203	USPS - EAST
	9204	USPS - SOUTH
	9205	USPS - CENTRAL
	9206	USPS - WEST
	9207	USPS - WASH
	9248	USPS/SFC-NORTHEAST
	9249	USPS/SFC-EAST
	9250	USPS/SFC-SOUTH
	9251	USPS/SFC-CENTRAL
	9252	USPS/SFC-WEST
Y9		JUSTICE/FBI
	9208	JUDICIARY
	9209	DEPT. OF JUSTICE
	9235	FBI
	9236	DRUG ENFORCEMENT ADM
	9237	DOJ-PRISONS
Z1		O.E.M. SALES - FOR SUBSEQUENT RESALE
	357X	O.E.M. SALES FOR SUBSEQUENT RESALE
	357Y	O.E.M. INSTALLATION FOR PRODUCT DEVELOPMENT/TEST
	357Z	O.E.M. DIVISION RESTRICTED ACCOUNT
Z3		SALES TO PC RETAILERS
	893R	SALES TO PC RETAILERS